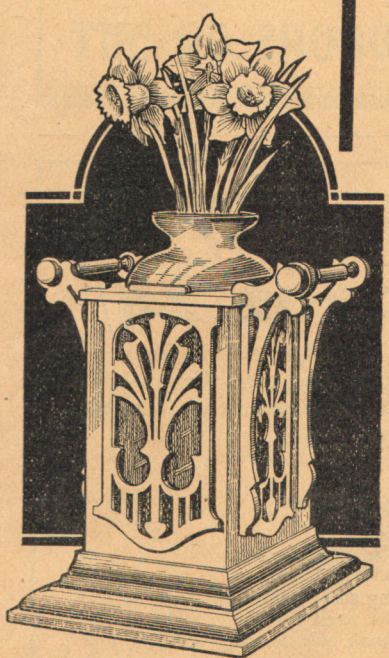
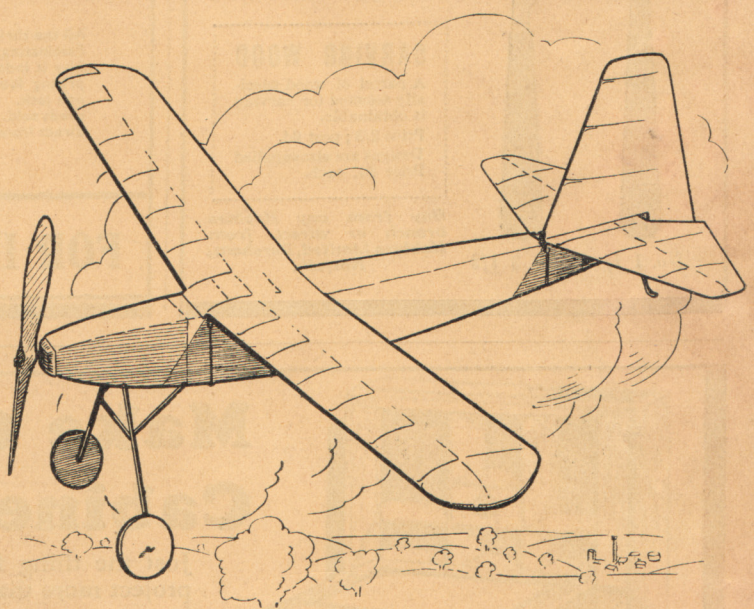
Hobbies WEEKLY

DESIGN CHART FOR MAKING THIS VASE STAND





How to build this flying

MODEL AEROPLANE

May 30th. 1936

2D

Vol. 82. No. 2119

THE FRETWORKER'S AND HOME CRAFTSMAN'S JOURNAL

KNIVES *for Wood and Chip-carving . . .*

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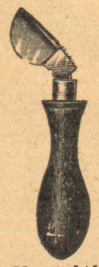

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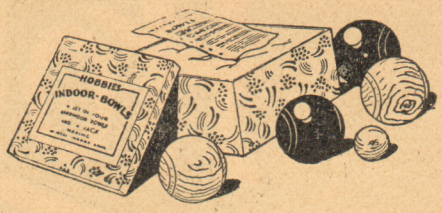

4/6

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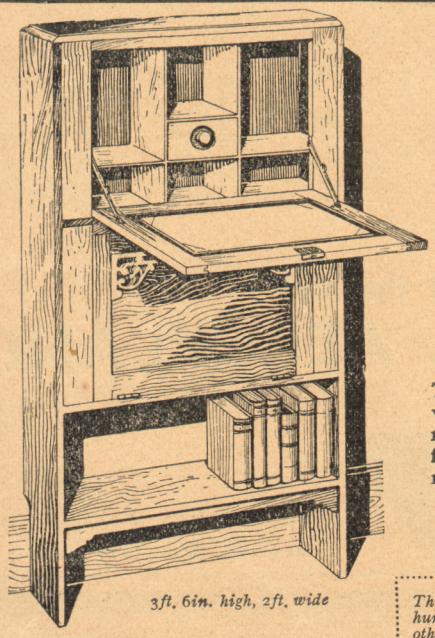


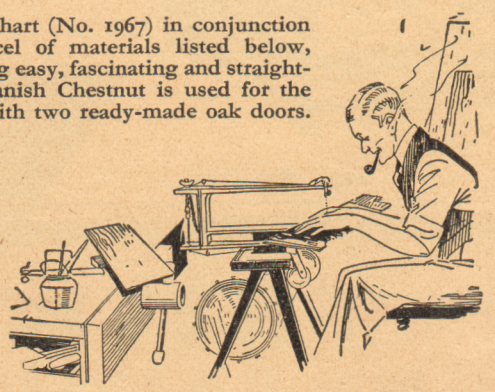
3ft. 6in. high, 2ft. wide

Make this Wall Cabinet for 24/-

Just the thing for the lounge ! It does not project more than 5 inches from the wall, yet is a roomy, serviceable bureau, with a useful cabinet and shelf beneath.

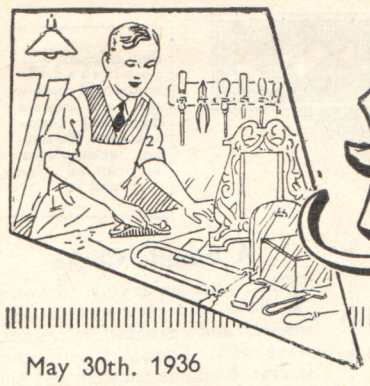
Building Made Easy !

The design chart (No. 1967) in conjunction with the parcel of materials listed below, make building easy, fascinating and straightforward. Spanish Chestnut is used for the main parts with two ready-made oak doors.

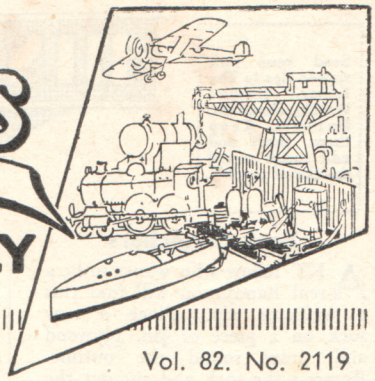


Design 1967, price **4d.** Spanish Chestnut, with two oak doors, beading, etc., **20/-** carriage forward. Lock, Ball Catches, Drop Handle, Lid Stays, Hinges, etc., **4/3**; postage 3d. A complete parcel **24/-** carriage forward.

This design and hundreds of others are shown in Hobbies 1936 Handbook, price 6d. post free 9d. from Hobbies Ltd. Dereham.



Hobbies WEEKLY



May 30th. 1936

Vol. 82. No. 2119

The Editor's Notes

I KNOW readers are always interested in the many varieties of wood, and of the jobs for which it is best suited, so I am delighted to be able to offer them, by special arrangement a free and excellent book on the subject. It is called "The Architect's Dictionary of Wood" and not only illustrates 72 different classes of wood very clearly but gives much interesting information. This covers its texture, width of boards, colour, figure and the jobs on which it can be used. The book is a splendid encyclopædia of information, and I have been fortunate in getting sufficient (I hope) copies for readers. Those wanting one should send to me and enclose 2d. in stamps to cover the cost of the postage back to them. The book is well worth that, believe me.

IT sometimes happens you want to produce a glaze finish to your woodwork which will withstand heat and water. You can now obtain an excellent preparation called Jet Glaze, which is black; Silver Glaze, which is lustrous; and Porcelain Glaze, which is white. All are easily applied to wood, metal, pipes, taps, baths, etc., with a brush and leave an excellent finish. There is also a Gold Glaze specially suitable for frames, ornaments, clock faces, and even dance shoes, which dries very quickly and is washable. Fuller particulars are to be found in a leaflet obtainable free on request to the Editor.

BY the way, I hope all readers with a camera are entering our Photographic Competition. Details of this month's subject are given on page 210 and entries must be in by the end of the week. These contests will run each month during the summer and there are senior and junior sections to provide a greater opportunity for all. Decide now to enter every contest.

A LETTER and photo from the Hobbies League Members in the Orphanage Aberlour Club I have received, proves their interest and enthusiasm, and it is pleasing to hear of an exhibition they held recently where one member made nearly £2 by the sale of his models.

ANOTHER note comes along from Miss W. M. Webber (also a League Member) of Cannington, Somerset, who carried off a prize of 20/- in the Novelty Section of a recent Knitting Contest. This was done by showing the Wool Winder made from Design No. 2053. This practical article, by the way, is still being made everywhere and is one of the most popular of its type which we have had.

HERE are two short League Notes of particular interest to those in the districts concerned. H. S. Claymore, the leader of a Club in Warwick mentions that it will be closed down during the summer, but open again in the autumn. G. and R. Jefferies of 43a Oxford St., Mayfair, Johannesburg, Sth. Africa are desirous of forming a Club in their district and would like other fellows to get in touch with them.

ANOTHER funny hobby I heard of, too, is the collection of bicycle lamps, for one fellow has accumulated over 700 of them. He has every known variety, from the candle type fixed to the bone shaker of 1810 to the elaborate electric anti-dazzle lamp you can now buy. Our George is constantly changing his, but I do not think he is collecting them!

CONTENTS

FREE DESIGNS—Vase Stand and Jigsaw Machine

Hints and Tips	202
A Vase Stand	203
Flying Model Monoplane	205
How To Lubricate Your Cycle	208
Making a Coracle	209
Novel Matchbox Holder	211
Replies of Interest	212
Hobbies of Great Men	212
Faults in Photography	213
Hints on Tray Making	215
Film Notes	217
Working Model Jigsaw Machine	218
Correspondence Club List	221

Next Week's Design—Hanging Post Card Frame

Correspondence should be addressed to: The Editor, Hobbies Weekly, Dereham, Norfolk, and a stamp enclosed with the Reply Coupon from Cover iii if a reply is required. Particulars of Subscription rates, Publishing, Advertising, etc. will be found on cover iii.

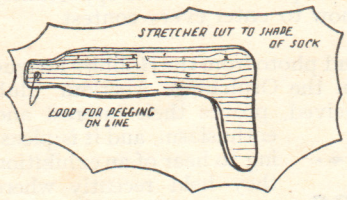
Send your own simple tips to The Editor, Hobbies Weekly, Dereham, Norfolk. Keep them short and add rough pencil sketches if possible.

HINTS AND TIPS WORTH KNOWING

For original Tips published the sender will receive one of Hobbies Self-filling Fountain Pens. We cannot acknowledge or print all tips sent in.

Sock Stretchers

ANY fellow who wants to be a real handyman will find this a welcome tip. Place a new sock on a piece of ¼in. plywood and draw round the outline. Remove the sock and cut out the shape, using this as a template



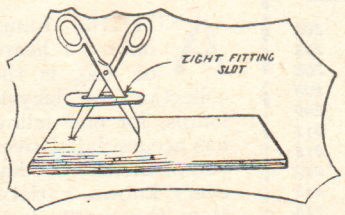
to cut out as many pairs as are needed. A hole in the upper part will hold a cord loop for pegging on the clothes line. Socks, immediately after washing, should be placed on these stretchers and left until dry when they will be found to look like new. An excellent seller at any bazaar.

Force Pump Substitute

SHOULD the sink or bath waste become blocked and no force pump is to hand an efficient substitute can be found in half a grape fruit skin, which should be placed concave side downwards over the waste grating, and depressed sharply once or twice with the palm of one's hand.

Temporary Compasses

A USEFUL and easy method of drawing circles on wood or metal is that shown in the sketch. Cut a slot out of a thick piece of



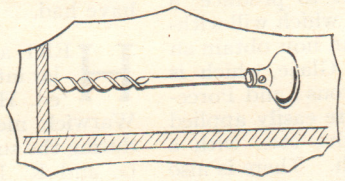
cardboard or thin plywood, and push the scissors through it, as shown. By moving the strip of cardboard up and down, the radius may be altered to suit your requirements. Hold the strip tight to the scissors when describing the circle and keep the centre point firmly on the work.

Uses for broken glass

WORK can be smoothed down very nicely by a piece of broken glass, if used in this manner. Place edge of glass on surface to be smoothed or reduced holding same at angle of about 45° sloping toward you and pull gently but firmly, always in direction of grain. Stiff drawers can be made to run easily if a piece of broken glass is applied to underside runners, or a complete new surface put on your old kitchen table. By repeating two or three times, as much ⅛in. can be removed in this manner. Use fine grade glasspaper afterwards.

A Bit Holder

WHEN it is necessary to bore a hole in an awkward position and a ratchet brace is not obtainable, a satisfactory method



is to use a door knob as shown in the illustration.

Tip for Cyclists

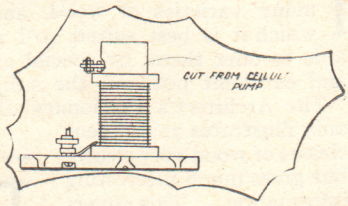
IF the rims of your bicycle are rusty here is a way to clean them. Take some whiting, and put in a tin, and add enough paraffin to form a thin paste. Apply this to the rusted part with, for instance a small brush, and allow to dry. Then take a rag and rub hard to remove paste, and soon the rims will shine.

Sealing Wax Economy

PIECES of sealing wax are often thrown away when they become too small to hold without burning one's fingers. Get a piece of wire about 2ins. long, heat it over a match, and then dig it into the small piece of wax. In this way the wax may be used to the very last iota.

A Simple Choke

THE accompanying drawing shows the construction of a simple and satisfactory short-wave H.F. Choke. The former is 2ins. long cut from an old ⅝in. celluloid bicycle pump plugged



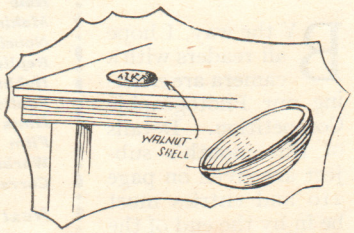
with a shaped piece of wood but allowing for the head of the top terminal. Between the two rings of insulating tape wind 36 turns of No. 28 D. C.C. wire, taking each end to a terminal. The ebonite base is roughly 3ins. by 1½ins. by ¼in. This H.F. choke is for working up to about 30 metres.

A Finger Guard

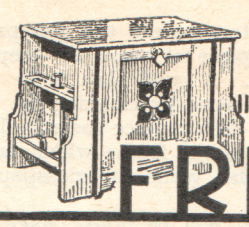
FOR a beginner in fretwork a simple finger guard is most useful. This is made of a piece of tin, about 2⅜ins. wide and 1½ins. long. Cut with an old pair of scissors and bend so that the 1½ins. is long ways on your fingers. This will stop the fretwork saw from cutting your finger. and can be held in place by a couple of small rubber bands.

A Tack Box

GET half of a walnut shell, and then make a hole in your bench a little smaller than the shell. Glue the half shell in it,

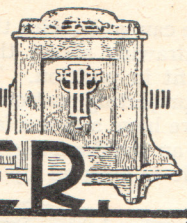


and you will have a tack box, flush with the top of your bench but so shaped the tacks or small nails will come out quite easily as required.



FOR THE

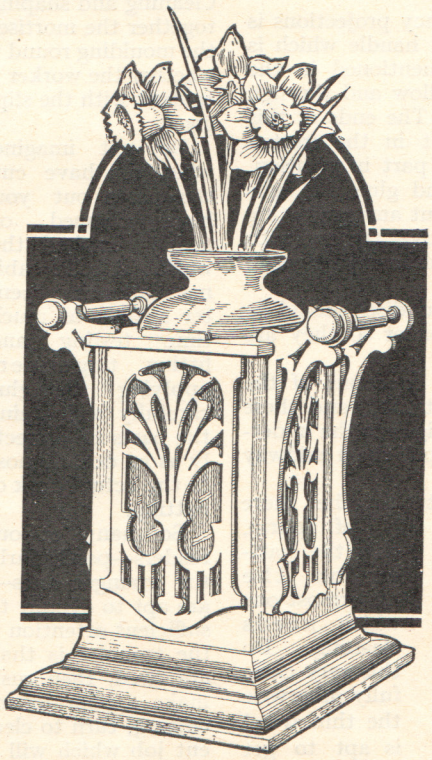
FRETWORKER.



THIS week's Design Sheet provides patterns for making one of those popular little types of Vase Stand which have been made up in hundreds by readers in the past. We have not had a similar design for some considerable time so we are sure new readers will be as equally pleased as those who have seen this type of article in years gone by.

As usual, the patterns are printed full size ready to paste to the respective pieces of wood. The usual parcel of material is supplied with all the boards cut the size required for each part. In order too, to facilitate further the worker's putting together, each one of these pieces is numbered off so all he has to do is to put the numbered pattern on to the same numbered piece of wood.

VASE STAND



The Main Framework

There is not a great deal of cutting to be undertaken with the fretsaw because the main pieces of the base and top are all without frets. It is only in the case of the ornamental handles on two sides, and the overlay panels on each of the four sides, that really demand the usual fretwork attention.

The handles are cut from 3/16in. wood and four of them are needed. In the case of the overlays, they are 1/16in. material and can probably be cut in pairs. If this is done, nail two pieces of material with fine fretnails which pass right through the bottom board, and are turned up beneath. Then paste the pattern on the topmost board and cut out in the usual way.

Before Starting

The nails should be driven in outside the pattern, and all the interior work undertaken first. Then, when the outline of the piece is cut out, the two parts are released and you have the two overlays at one operation. The cut-away view which we give here shows the construction, and it is a good plan to study the parts and to read this article so you know exactly how they are put together before commencing work.

The main base is really the second one up. It is a ⅜in. piece of wood with an interior square cut from it, and two mortises at AA. The outer edge of this piece of wood is rounded off nicely with file and glasspaper, and the mortises must be cut carefully with square corners to ensure the correct fit of the tenons on the two sides.

The Sides

Next get out the four sides, making sure that the edges are all straight and true. Lay a ruler along them to ensure this, as shown in the drawing, and if any light can be seen through, the part must be planed or carefully filed down with the flat part of the file until it is square. All the four uprights must be cut correctly because they fit together to form a rigid framework.

Before attempting to fit them, cut out the top also, and here again you have two mortises to take the top end of the two sides. The fitting together must be undertaken carefully, and a little time spent in getting the pieces to fit as they should.

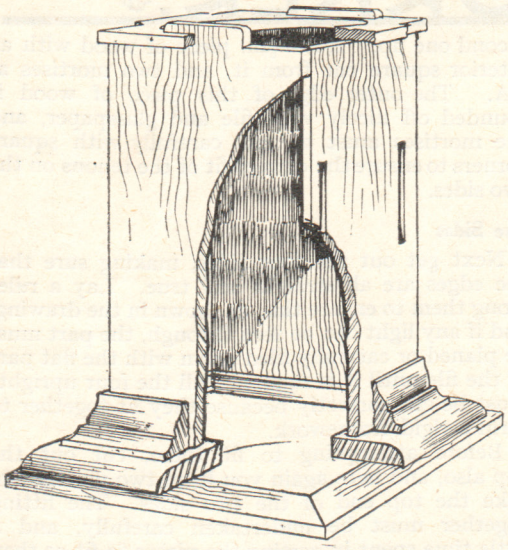
The two sides with the mortise and tenon joints must stand between the top and bottom, then the other two sides fit between them. All of them, of course, must stand flat on to the base and rest close up to the underside of the top.

The tenons in the top of the two sides, it will be noted, are left projecting through the top itself, and the corners are rounded according to the pattern. This projecting tenon then looks less unsightly than it would if cut flush with the actual top piece.

When you have got each tenon temporarily tested correctly, be sure to make a little pencil mark on the inside so you can return that part to its proper place when ready for finally gluing.

The framework can be glued up now, and it is a good plan to pass two pieces of string round near the top and bottom to help to hold the glue firmly until it has set. Remember in doing this, to pad up the corners with paper to prevent the string cutting the wood.

Now we can go on with the handles on the sides, and the drawing shows their construction when ready to fit in position. Two ornamental pieces form the projecting portions, and on the inner edge of these we have a tenon (at C) a short slot at the top, and an overhanging piece. The position of the handle is ensured by the mortise and tenon



A cut-away view of the main work

joint, and it should slide easily on to the top when finally glued in position.

The Handles

The space between the two fancy projections is occupied by a handsome erinoid handle which is supplied by Hobbies Ltd. as mentioned in the fitting list herewith. This is hollow and through it passes a piece of round rod. The ends of this rod pass through the holes cut in the fretted handle pieces. Put the erinoid part in position, run the dowel right through and glue the ends into the wooden handle part. Cut any projecting piece of the dowel rod off, then cover the end with one of the little circular discs cut from the waste wood of the top as shown.

The outer edge of these circular discs should be slightly rounded off with glasspaper so they are not so obvious.

On the sides themselves, we have one of the 1/16in. overlays previously mentioned, and these are glued on after being slid up tight to the underside of the top. Remember to put them midway on each side.

If the overlays have been cut altogether there is, of course, only the pattern on the uppermost one which needs cleaning. Do this very carefully otherwise the thin wood is apt to get broken. Be sure, too, to use the glasspaper on a proper block or piece of wood to keep a flat surface underneath. A good plan is to use the framework of waste wood for cleaning up. Nail it down to the bench, then replace the actual overlay in it. This provides the frame which holds the work and keeps it flat, while the glasspapering is being done.

These overlays, it will be noted, vary slightly in width. The wide ones go on the plain sides, and the narrow ones fit between the handle projection pieces.

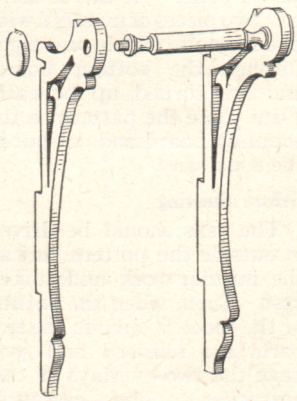
The Moulded Edging

Finally, we have the fancy moulding which goes round the bottom and helps to fill up the space between the base and the overlay on the sides. This moulding is, of course, supplied already shaped and is Hobbies No. 17. Four pieces 5¼ins. long are required, and they are mitred at the ends so the corners fit properly. Be sure to get them at an angle of 45 degrees and test up each piece in its actual place. The long side of the moulding stands on the sides, and the shorter edge on the base. This must be remembered when cutting the mitre.

One of the little mitre cutting boards obtainable for 9d. from Hobbies Ltd., is just the thing for this work, and always comes in useful for jobs of a like nature. Glue the moulding firmly into the corners of the sides, and base, and, of course, put a little glue on the ends so these, too, hold together.

The worker will realise that apart from the cutting, the whole article is going to be made or marred by the care taken in the actual construction. Cleaning and shaping the various parts, the fitting together the mortise and tenon joints, and adding the moulding round the edges, will all help to prove whether the worker is an able fellow, or one who is content with the slip-shod job which does not look good.

Do not imagine when you have cut the parts out you have finished or nearly finished the work. A good cabinet maker or carpenter spends as much time testing and fitting together, applying the glue carefully and seeing the parts fit correctly as he does almost in the actual work of cutting.



The construction of the handles

So many of our readers—particularly the younger ones—are apt to overdo the work at first and not pay sufficient attention to these little points. One of the troubles is that they go on cutting until they are tired, then rush over the rest of the work and make a poor job of it. If you are tired of the cutting, turn to cleaning or fitting or some different job which will be a little relief.

MATERIALS SUPPLIED

Fretwood—For making this Stand we supply a parcel of mahogany and whitewood, including 3/16in. rod and sufficient moulding, 2/6, post free 3/-.

Fittings—One pair of erinoid handles (No. 5395), 8d., a handsome Vase (No. 6007), 1/3. Postage on both 6d.

Postage on wood and fittings 6d.

A FLYING MODEL MONOPLANE

A realistic and practical flying model which has actually been made up by our expert and given several successful flights. Addresses for obtaining the material on request to the Editor.

THE flying model here described will be found quite easy to build. Although of light construction it is quite robust, and a good reserve of power enables it to be flown in windy weather with little risk of damage.

The framework is of birch, balsa and 1/16in. three-ply, covered with doped Japanese tissue, and the undercarriage is of steel wire.

Very few tools are required, but it is a great advantage to make, on grease-proof paper, a full size drawing of each part. By building up the work over this, accuracy and ease of assembly are ensured.

Fuselage

This consists of four longerons of 1/16in. square birch running from end to end, the top pair of which project 3/16in. beyond the stern post forming a slot to take the rudder. The shape is obtained by formers of $\frac{1}{8}$in. by 1/16in. balsa, except where the greatest strain comes, in which case 1/16in. three-ply is used.

First make a full size drawing of the side and plan, as shewn in Figs. 1 and 2. The dimensions of the formers shewn are to outsides of longerons.

The two sides are built up first. Pin the two longerons into position with drawing pins, and proceed to cut, from $\frac{1}{8}$in. by 1 /16in. balsa, the vertical members, which are cemented between the longerons with Durofix, the 1/16in. edge being placed down wards on the drawing. Spaces are left for the 1/16in. ply formers Nos. 1, 4, 6 and 12, as these are slipped into positi on later. A diagonal bracing piece is cemented between formers Nos. 11 and 12.

When the work is dry, remove, and pin down the drawing on the reverse side ; then build up the opposite side in the same way. Pieces of 1/32in. balsa sheet are glued to the outsides from the nose to No. 3 former, and trimmed to outline with a safety razor blade when the glue has set.

Take care to leave the correct spacing between the top and bottom longerons at the nose, to enable the nose former to be slipped into position later. Formers Nos. 1, 4, 6 and 12 are now fretted from 1/16in. three-ply with the grain running upwards. A 1/16in. square is cut from each corner, and the insides are fretted out leaving a frame $\frac{1}{8}$in. wide.

Assembly may now be commenced on the plan drawing. Place the sides in position, upside down, and glue Nos. 4 and 6 formers between them. If thin rubber bands are now stretched across and pinned down on either side, the whole job will be held square and true. Bend the ends inwards to follow the outline and hold in position with pins.

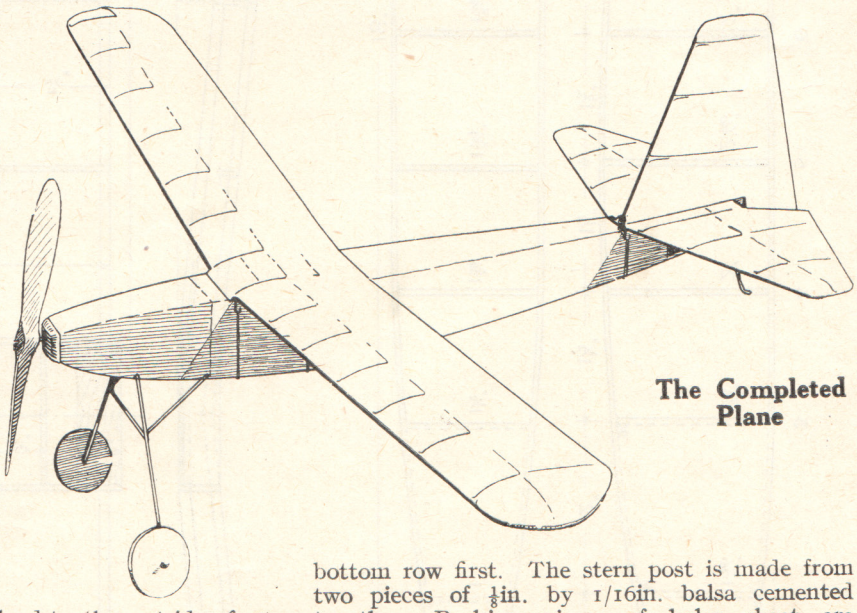
Glue formers Nos. 1 and 12 into place, noting that former No. 1 should be tilted inwards, 1/16in. from the vertical to give downthrust to the propeller.

Cut the remaining crosspieces, two of each, from $\frac{1}{8}$in. by 1/16in. balsa, and cement into position so that the ends overlap the verticals.

Working and Packing

Work from the centre outwards, finishing the bottom row first. The stern post is made from two pieces of $\frac{1}{8}$in. by 1/16in. balsa cemented together. Packing pieces of balsa sheet are cemented just in front of this between the longerons at the top and bottom.

When the work is dry, glue two pieces of brass tubing to take No. 20 gauge wire, across formers Nos. 2 and 3, to take the undercarriage legs. The



The Completed Plane

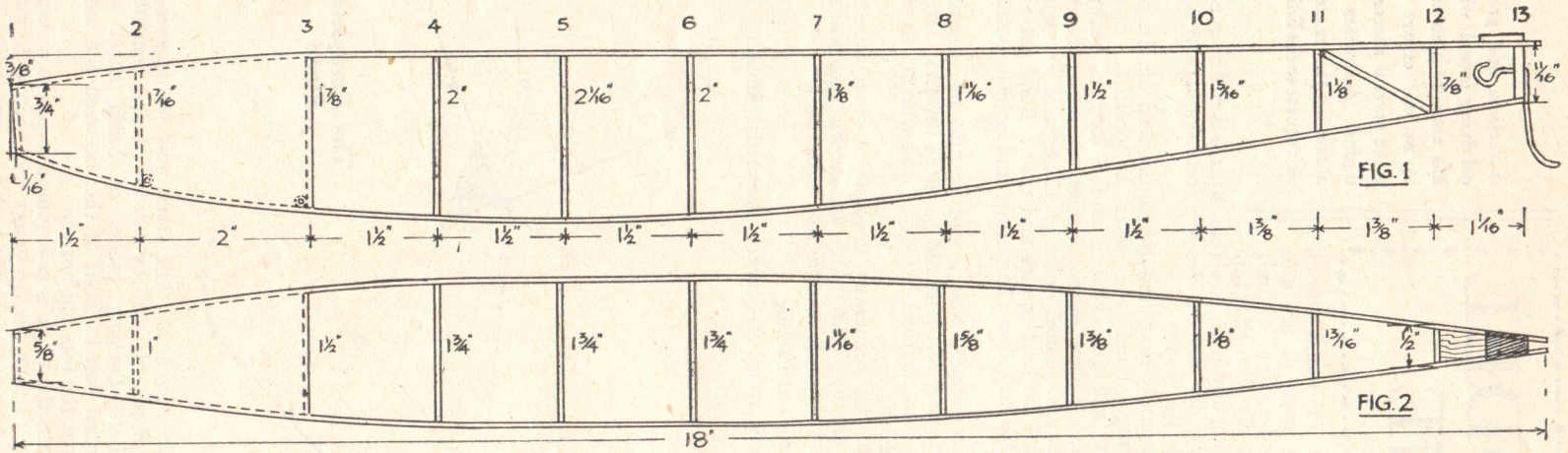


FIG. 1

FIG. 2

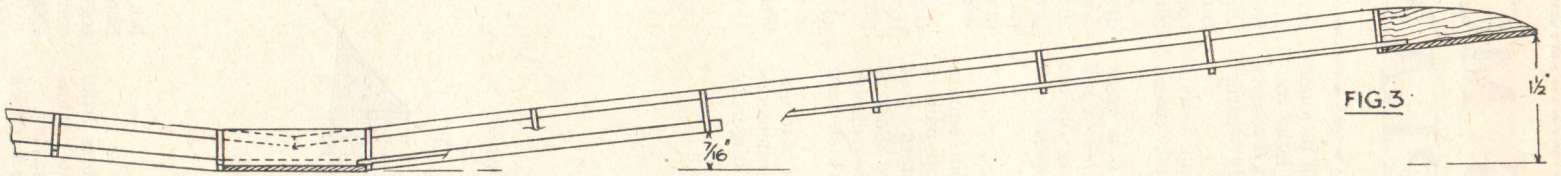


FIG. 3

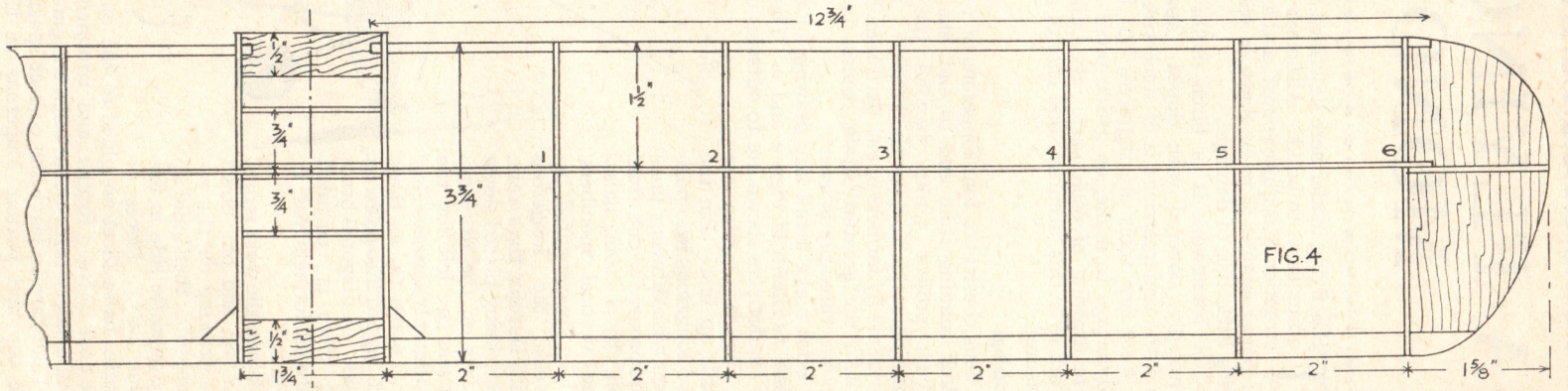


FIG. 4

top and bottom of the fuselage up to former No. 3 are then covered with 1/32in. balsa sheet. A piece of 20 gauge wire is bent at one end to form a hook, pushed through the sternpost, bent downwards and glued into position to form a tail skid.

Covering with Japanese tissue is then commenced, after smoothing the job with fine sandpaper. Begin with the bottom, then the top and finally the sides.

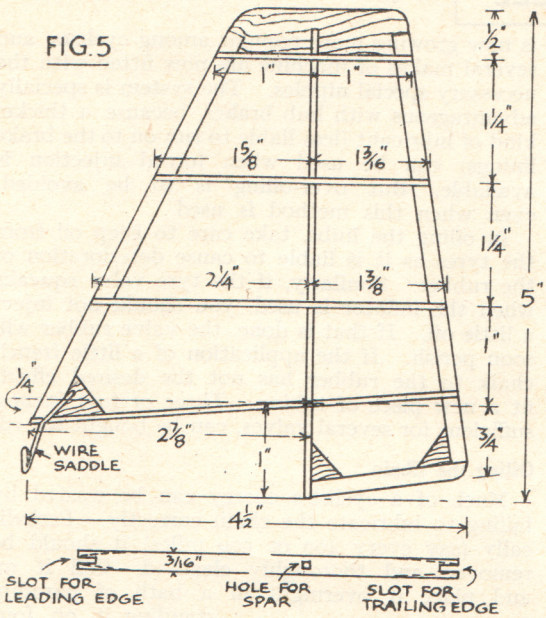


Photo mounting paste is smeared on the front of the nose former and the longerons, and the tissue cut to overlap the edges. Coax the covering on gradually from front to back, smoothing out wrinkles as the work proceeds, and trim the edges with a razor blade when dry.

The space between former No. 12 and the stern post on the left hand side is left uncovered to allow of the insertion of the rubber motor. The tissue is then damped, or lightly sprayed with water from a scent spray, and allowed to dry with the whole under a weight, upside down, to prevent warping.

Two coats of clear dope are then applied at intervals of an hour or two.

Mainplane

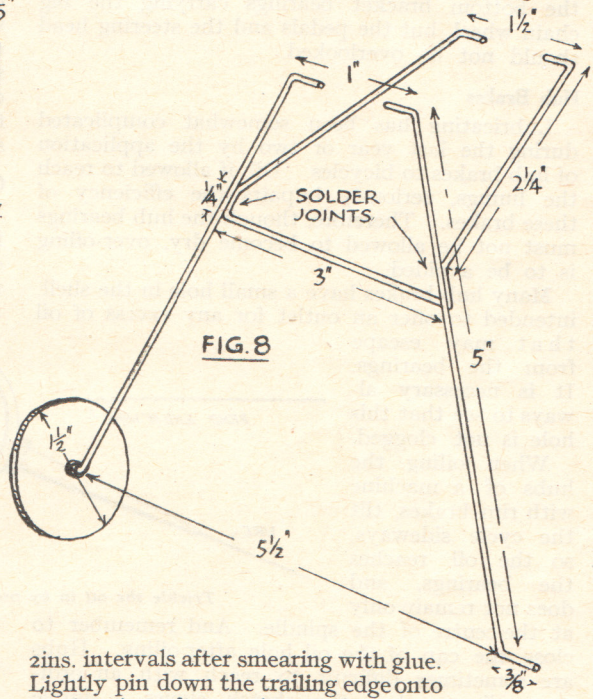
This is made in two halves, which are afterwards joined to the centre section. A plan drawing of half the mainplane suffices to work on, as this is reversed when building the second half. The leading edge and main spars are ⅛in. by 1/16in. birch, the trailing edge is ¼in. by 1/16in. balsa, and the ribs, spacing pieces in centre section, and wing tips are 1/16in. sheet balsa.

The centre section is built up first. Two ribs are cut to the full size outline shewn, with the grain running lengthwise. Pieces of 1/16in. sheet balsa, ½in. by 1⅝in. are glued between the ends of the ribs, and vertical pieces at positions ¾in. from the position of the main spar, on either side, to the depth of the rib at those points.

The lower main spar, 10ins. long, extends to only just beyond rib No. 2 at each side. This is steamed upwards 7/16in. at the ends as shewn in Fig. 3, and glued into the lower slots in the ribs.

The Remaining Ribs

Twelve remaining ribs are cut to the shape shewn. The bottom spar slots are only required in ribs Nos. 1 and 2. To build up the wing halves, insert the rib slots into the leading edge at



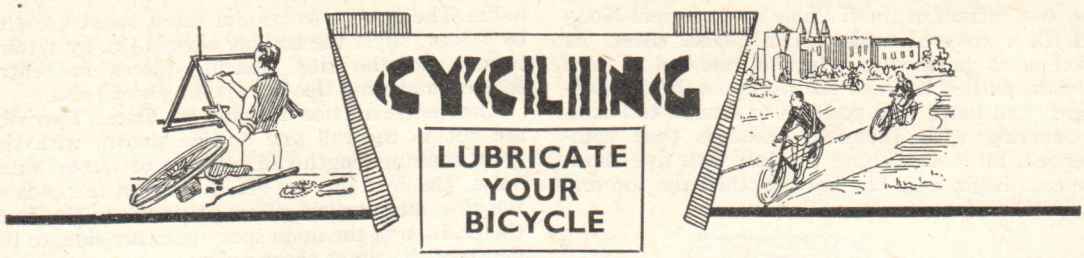
2ins. intervals after smearing with glue. Lightly pin down the trailing edge onto the drawing, after cutting 1/16in. square slots into which the rear ends of the ribs are slipped, and glue the latter into place.

Cement the wing tip onto the outside of rib No. 6, and the top spar into position.

(To be Continued)

MATERIAL REQUIRED

1/16in. by 11/6in. Birch, 4 pieces 18½ins. long, for longerons.
1/16in. by 1/16in. Birch, 1 piece 5ins. long, for rudder spar.
1/16in. by ⅛in. Birch, 4 pieces 14ins. long, for leading edge and 1 piece 10ins. long, for mainplane spars.
1/16in. by ⅛in. Balsa, 2 pieces 36ins. long, for fuselage cross-pieces.
1/16in. by 3/16in. Balsa, 3 pieces 36ins. long, for tail unit.
1/32in. Balsa sheet, 1 piece 16ins. by 2ins., for fuselage.
1/16in. Balsa sheet, 1 piece 36ins. by 2ins., for ribs, wing tips, etc.
1/16in. three-ply, 1 piece 12ins. by 2ins., for formers and wheels
¼in. by ¾in. by 5/8in. Satin walnut, for nose block.
¼in. by 7/8in. by 9ins., Satin walnut, for propeller.
18 s.w.g piano wire, 1 piece 4ins. long (propeller shaft)
20 s.w.g piano wire, 1 piece 30ins. long, (undercarriage and tail skid).
1 small metal cup washer to slide on 18 s.w.g for propeller shaft.
1 6in. length brass or copper tubing to take 20 s.w.g. wire.
1/1in. length brass or copper tubing to take 18 s.w.g (for propeller shaft bearing).
1 Sheet Japanese tissue, 20ins. by 30ins. for covering.
1 small tin clear dope.
3 fine rubber bands, 2½ins. across flat as used in offices.
80ins. of flat strip rubber ¼in. wide.



HERE are some practical pointers for the cyclist who wishes to ride without fatigue, and to prolong the life of his machine.

In no case should oiling be neglected until squeaks develop. Little and often is a good rule to follow in this matter. A few drops of oil every 150 or 200 miles is better than a gallon at irregular intervals. Some parts of your machine will require lubricating more frequently than others.

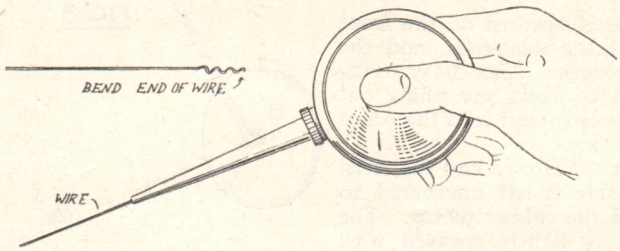
Chief in importance are the wheel hubs and the bottom bracket bearings carrying the big chain wheel, but the pedals and the steering head should not be overlooked.

Hub Brakes

Lubricating has been somewhat complicated during the last year or two by the application of hub brakes to bicycles. Oil, if allowed to reach the linings, seriously impairs the efficiency of these brakes. Therefore, though the hub bearings must not be allowed to become dry, over-oiling is to be avoided.

Many hub brakes have a small hole in the shell, intended to offer an outlet for any excess of oil that may escape from the bearings. It is necessary always to see that this hole is not clogged.

When oiling the hubs of a machine with rim brakes, tilt the cycle sideways, so the oil reaches the bearings, and does not remain only at the centre of the spindle. And remember to close the cap of the oil hole after oiling. Hubs are sometimes difficult to reach with an ordinary oil can, but the sketch shows a simple way of overcoming this difficulty.



Trickle the oil in by means of a bent wire

A length of wire is inserted into the end of the oil tube, and this will conduct the oil to the required spot.

Use of Paraffin

Every few months it is wise to flush out the bearings with paraffin, thus removing the dirty oil that has accumulated. Fresh lubricant should then be applied at once—paraffin allowed to remain will create rust, though oil is the surest safeguard against it.

The grease-gun system of injecting lubricant is now growing more popular among cyclists, and several makes of machine are now fitted with the necessary special nipples. The system is specially advantageous with hub brakes, because a thicker kind of lubricant (less liable to run on to the brake linings) can be used when forced injection is available. But over-oiling is to be avoided, even when this method is used.

In oiling the hubs, take care to keep oil from the tyres as it is liable to cause deterioration of the rubber. Similarly, if the tyre valve squeaks when the inflator is used, you should not inject a little oil. If that is done, the valve rubber will soon perish. If the application of a little french chalk to the rubber has not the desired effect, fit a new piece of tubing. Three or four inches, sufficient for several valves, can be bought for 1d.

Oiling the Chain

Much of a cyclist's energy can be wasted by failing to lubricate the chain correctly. Periodically (say every 400 or 500 miles) it should be removed and thoroughly cleansed. Coil it up and place it overnight in a bath of paraffin, standing it on four small pieces of wood, so dirt from it will sink to the bottom. Then fit it on the machine again and brush graphite grease into the rollers. The application of a little fairly thick oil once a week will keep it in good running condition until the time to remove it comes round again.

Grease for the Cables

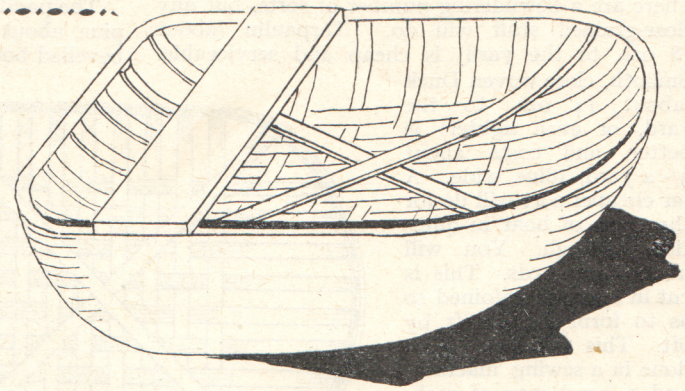
The cables of a machine fitted with cable brakes also require attention at intervals. Fairly thick grease should be forced into the outer cover. The easiest way to do this is to extend the cover by slipping a piece of rubber tubing over the end. Fill the tubing with grease and nip the end with finger and thumb. Then squeeze the tube, and thus force the grease into the cable cover.

Finally, make a note that the brake shoe springs, and any other moving parts, require a touch of oil occasionally. There are the brake levers and the cyclometer to oil—the latter sparingly, however, or the figures will become obscured by the excess lubricant.

An Index for Vol. 81 is now available price 4½d. post free

MAKE YOURSELF A CORACLE

Here's a boat you can make to provide plenty of excitement. It is quite straightforward and watertight.



THE coracle is a boat that was used by the Ancient Britons, and is still used today, particularly by some fishermen on the Severn and the Dee. Whilst it is a bit risky to take on the open sea, it is quite safe and strong on ponds, river backwaters and other places where you can play "Robinson Crusoe" games or go exploring. It is light and easily carried about. You look something like a snail with his shell!

You will need 20 strips of ash each 1½ins. by 3/16in. in section. 8 are 6ft. long, 8 are 7ft. long, 2 are 8ft. long and the remaining 2 are *approx.* 16ft. long. It is essential that they are knot-free. They are soaked in water for about a week previous to using, so they bend easily.

Basket Framework

The framework is woven exactly like a basket. Lay eight of the 6ft. strips on the ground, and weave the eight 7ft. strips through them. The two 8ft. strips are placed diagonally, and it is a good plan to lash these, temporarily at their junction with the other strips at the centre of the boat.

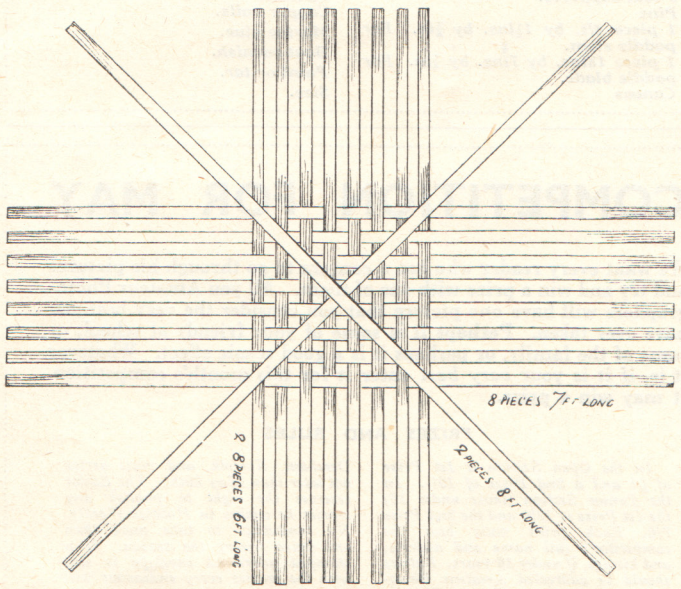
The tricky part now comes. You have to bend up the ends of the strips to form the sides of the coracle. The boat is not shaped like half a sphere, but more like half a pear. It will probably be helpful if the two ends of one particular strip are bent up and kept in place by tying a string across.

If all the strips are so held, there being 18 strings altogether, it is a simple matter to space out the strips evenly if they have got shifted during the bending, and by tightening or slackening a string, to get the coracle more or less symmetrical.

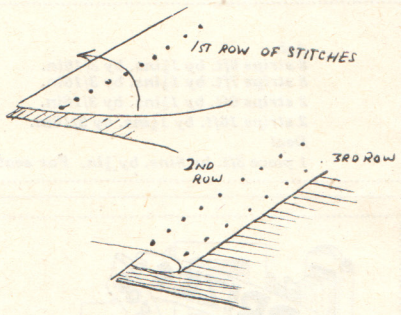
Although the coracle is not so graceful a craft as, say, a canvas canoe, it is as well to take pains over getting the framework well shaped.

Fitting the Rim

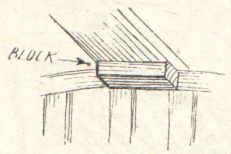
Before the strings are cut away, the rim must be fitted. There are really two rims, an outer and an inner. Its shape is clearly seen in the drawing. The framework may now be nailed with copper nails, which are clenched over on the inside. This done, the strings are cut away.



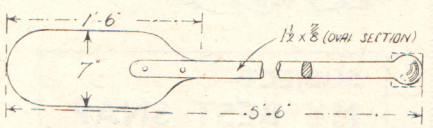
All these pieces are of 1½in. by 3/16 stuff



Method of making seams for canvas

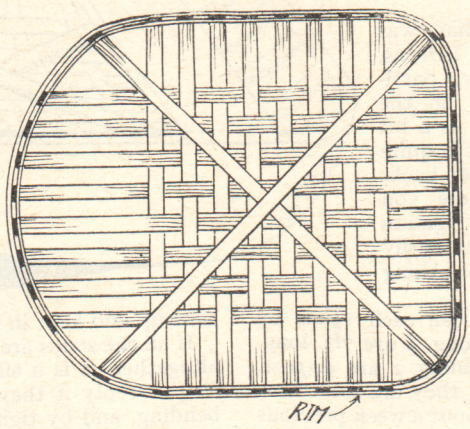


Looking up under the seat



Details of how the paddle is made

A length of stout canvas is now required. An old tent may be used, if you have one or even old waterproof "macks," but the canvas can be bought at camping outfitters and similar places. There are a bewildering number of sorts, but any close-grained stuff will do. Tarpaulin (about 18 ozs. to the yard) is cheap and serviceable. Smooth, close woven Duck (about 14 ozs. to the yard, or even lighter) is better, and costs about 3/- a yard, 48ins. wide. A far cheaper sort will do for the type of boat in question, though. You will need four yards. This is cut in half and rejoined so as to form a piece 8ft. by 6ft. This will have to be done in a sewing machine, and a good way of making a really strong seam is shown in the drawing.



The rim is two pieces of approximately 16ft. by 1½in. by 3/16in.

Paint or Tar

Paint or varnish the framework well, and then proceed to cover it with the canvas. A good plan is to use *marine* (not ordinary) glue, to make the canvas adhere to the strips. Pleat the canvas into neat folds but on no account cut it. Tack to the rim with the copper nails.

The Severn fisherman usually give the coracle a coat or two of tar, but this is rather messy to use, and good qualty paint does just as well. Give the canvas a coat of hot size first.

The seat is merely a strip of deal, approx. 3ft. by 6ins. by ¾in., resting on the widest part of the coracle, and screwed to small blocks which in turn are screwed to the rims.

The Paddle

The paddle is made from a piece of well seasoned pine, about ¼in. thick, shaped with a fretsaw, and bevelled both edges, all the way round. A strip of pine, ash or suitable wood 1½ins. by ⅞in. in section and 4ft. 6ins. long is planed to an oval section and carefully glasspapered.

One end is provided with a slot into which the paddle blade is fitted and screwed, whilst blocks of wood can be glued on the other end to thicken it, and afterwards chiselled into a ball shape (very useful if the paddle slips through the hand). Well varnish the paddle.

It is used differently to ordinary canoeing, being held between the hands over the front of the coracle (the narrow end), and used with a sculling movement, not resting on the edge of the boat. It does not require much practice to manipulate

The foregoing coracle is described from one actually in use on the river Severn. Coracles are much cheaper than canoes (though, of course, they have more limited uses), and for general knockabout purposes, they are hard to beat. Why not try one out for yourself ?

LIST OF MATERIALS

Ash
8 strips 6ft. by 1½ins. by 3/16in.
8 strips 7ft. by 1½ins. by 3/16in.
2 strips 8ft. by 1½ins. by 3/16in.
2 strips 16ft. by 1½ins. by 3/16in.
Deal
1 piece 3ft. by 6ins. by ¾in. For seat.
1 piece 1ft. by 1in. by 1in. To cut 2 seat supports.
Pine
1 piece 4ft. by 1½ins. by ⅞in. For paddle stem.
1 piece 18ins. by 7ins. by ¼in. For paddle blade.
Canvas
4 yds. 48ins. wide.
Sundries
Copper nails.
Marine glue.
Boat varnish.
Paint or tar.
Size.

SUBJECT—
MY BEST SNAP

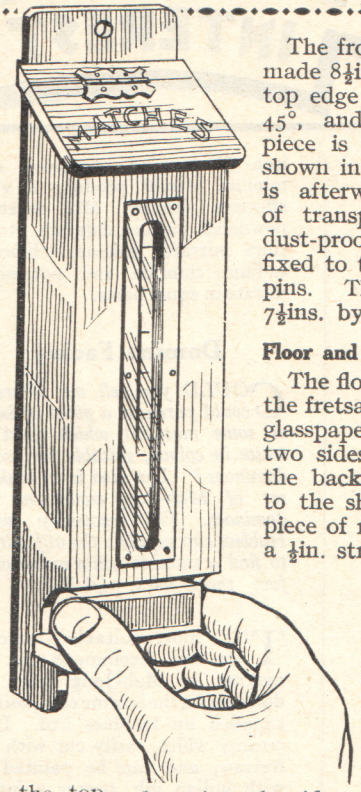
COMPETITION FOR MAY

We want every reader who has a camera to go through his pictures and try and win a prize with one of them. All you Amateur Photographers will have *one* picture that you consider the very best you have ever taken. Perhaps it is some of your friends at school, or some of the family, or perhaps it is a good scenic effect. Whatever it is, if it is your *very best* enter it for this month's competition. It may win a prize.

PRIZES AND RULES

In the Open Section a 1st Prize of £1 and a 2nd Prize of 10/-. In the Junior Section (those under 16) the 1st Prize is 12/6 and the 2nd Prize 7/6. Each print must bear the competitor's full name and address, and his age, if under 16 years. Entries should be addressed Amateur Photographic Competition, Hobbies Weekly, Dereham, Norfolk, and must arrive not later than May 30th. The Editor reserves the right to publish any entries he wishes in Hobbies Weekly. No competitor to take more than one prize during the season. If a stamped addressed envelope is sent with the entries every endeavour will be made to return them.

NOVEL MATCHBOX HOLDER



HERE we have a novelty store cupboard for matchboxes which should be well worth the time and trouble taken to make it up. The usual method of keeping the packet of boxes of matches loose on the cupboard shelf is superseded by the neat little cupboard shown.

This has been so designed that it holds the boxes flat one above the other, the sloping top being so made that it forms a flap or door through which the boxes are dropped in. An opening in the front shows when the store of boxes is getting exhausted, so a new supply may be purchased.

Simple to Operate

When a new box of matches is required all there is to do is to pull out a box from the lower slot just above the floor. This allows the boxes inside to fall ready for the next one to be withdrawn.

The wood suggested for making up this novelty is ¼in. mahogany, and one of Hobbies "B" panels of this wood at 1/2, takes all the pieces and is therefore very convenient for marking out and cutting.

The back is the first piece to set out, and this is a 14ins. by 3⅜ins. with the top corners rounded off neatly. A hole is also cut in the middle ready for hanging up. Glued and pinned to this back are the two sides, shaped and cut with a fretsaw as Fig. 1, the measurements shown being carefully followed when setting them out on the wood.

Each side is put on the back with edges flush, as seen in the diagram of the partly assembled article at Fig. 2.

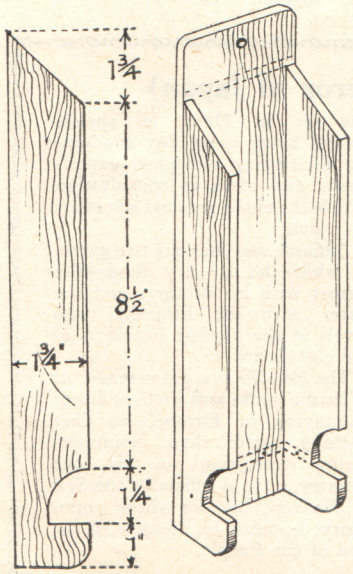


Fig. 1—A side

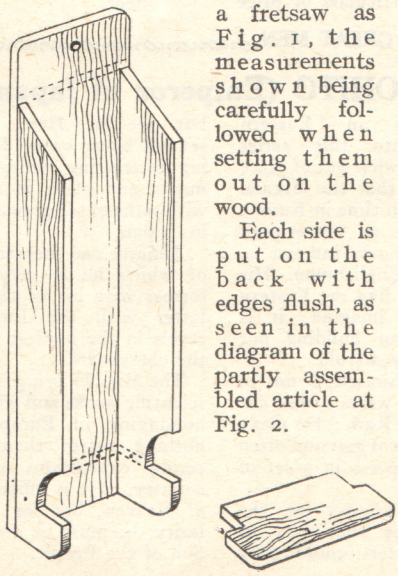


Fig. 2—The back and sides with floor

The front is shown in Fig. 3 and is made 8½ins. long by 3⅜ins. wide. The top edge is chamfered to an angle of 45°, and down the middle of the piece is cut a ½in. wide opening as shown in the diagram. This opening is afterwards covered with a piece of transparent celluloid to form a dust-proof window. The celluloid is fixed to the wood with six small fret pins. The size of the celluloid is 7½ins. by 1in.

Floor and Door

The floor is shaped as in Fig. 4 with the fretsaw and after a clean-up with glasspaper is pushed between the two sides and is glued and nailed to the back. The top or door is made to the shape shown in Fig. 5 from a piece of mahogany 3½ins. square. Cut a ½in. strip off the piece and hinge it, as shown, with a single fancy hinge (No. 5379) to the larger section. Chamfer the back edge of the smaller piece and glue it to the main back and, as an extra fixing, put in one or two fretpins through the back and down into the sides.

All the woodwork should be thoroughly cleaned up, and a coat of mahogany stain brushed on.

The Finish

The finish consists of either a coat of varnish or Lightning polish brushed over carefully. The word "Matches" would make a suitable attraction for the lid, and this might be put on in indian ink or paint before the varnish or polish is put in hand.

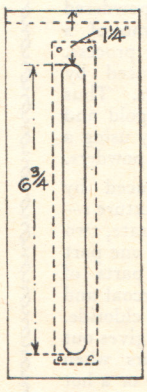


Fig. 3—The Front

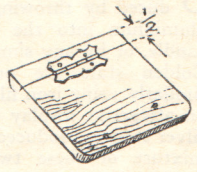


Fig. 4—The Floor shape

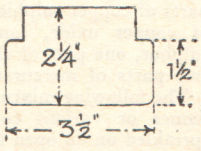


Fig. 5—The hinged top

Fountain Pen Mending

COULD you tell me a suitable cement or glue to attach gold to a fountain pen? What is the material from which fountain pens are made?—(F.R.D.)

IT is practically impossible to cement together the broken parts of a fountain pen. The material of which they are made is generally xylonite, but synthetic materials such as erinoid and various kinds of bakelite are also used.

As you have broken the pen at the point end it is possible that a good repair could be effected with plastic wood. This will adhere to the xylonite fairly well, certainly as well as any known cement, and if the parts to be joined are first brushed over with Plastic Wood *Solvent*, and then when this has dried you mould the broken part with ordinary plastic wood and work it neatly round the end of the pen itself, you should obtain a satisfactory result. You can get a dark coloured plastic wood known as Ebony, or can colour ordinary plastic wood with Johnson's Wood Dye "ebony" colour.

Firework Stars

PLEASE tell me how to make coloured stars come from home-made fireworks which I am making —(B.W.)

SILVER stars may be produced by throwing powdered aluminium into the flame of a candle, or by any similar process. Golden stars are produced by similarly using iron filings. Thus an attractive display of gold and silver stars is produced by using a mixture of these two powders.

Blue stars are produced by using the following mixture:—8 parts of potassium chlorate, two parts of copper sulphide, one part of copper oxide, four parts of sulphur, one part of charcoal and two parts of mercurous chloride.

The following mixture gives out flames or various colours when sprinkled on an open fire or a hot hearth, so the addition also of iron filings and powdered aluminium should produce a very effective display. Mix together powdered barium chloride, strontium nitrate, calcium chloride, sodium chloride and potassium nitrate in equal parts.

Domino Facing

COULD you tell me where I could purchase a piece of bone, or some material which must be white in colour, suitable for facing dominoes? The idea is to make a set of Mah-Jong containing 144 dominoes. The necessary wood Hobbies can supply; the difficulty is to find a suitable white material to face them with.—(A.E.E.)

THE most suitable material we can recommend for the making of Mah-Jong tops or dominoes is the ivorine composition supplied by Hobbies Ltd. It is creamy white, easily cut with the fretsaw, and can be painted on with indian ink, poster paint or enamels.

The underside can be glued by scraping the surface to make it rough so the adhesive holds to the other piece. Particulars of price of this ivorine as well as size, are given in Hobbies Handbook.

A Model Volcano

HOW can I make a model volcano for a model theatre to have flames coming from the top in a variety of colours—preferably to change colour from red to blue?—(N.F.)

THE simplest method is to paint the back scene with the volcano and clouds of smoke on a sheet of canvas with very solid, opaque colours, leaving the parts unpainted where the flames occur. These parts can be varnished to make them more transparent. The fire effect is made by a light, with a revolving *colour wheel behind* this opaque back scene.

Another method is to have a partly modelled volcano with round open mouth and ragged strips of fine red and yellow silk cut and fitted inside the opening. These strips are blown upwards by a pipe and bellows at the same time as smoke from burning powder or smouldering wood in a tin pan is allowed to escape through the hole. At the same time, *colour wheel* and light will add to the effect.

HOBBIES OF GREAT MEN

HIROHITO (Emperor of Japan)

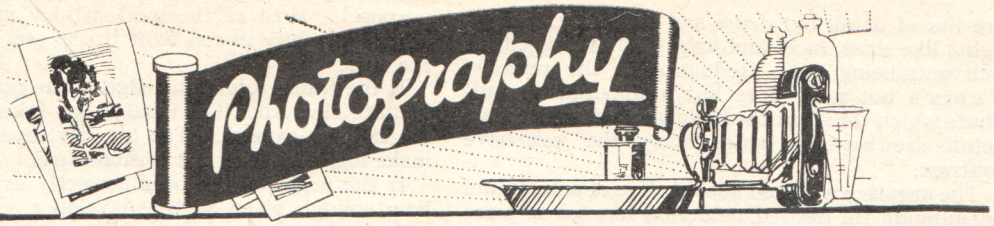
TO introduce an Eastern monarch into this series would seem somewhat out of place but for the fact that the Mikado has spent so much time in Europe and has become so westernised that his leisure hours interest us as much as any Englishman. His palace is nothing like the Eastern edifice we may imagine; it is a bungalow type of building not more than fifty years old.

The Emperor himself, if not in military uniform wears a well cut suit from Saville Row. He plays an excellent game of golf and often partners the Empress in a set of tennis.

Hirohito's laboratory at the Palace would be the envy of "Hobbies" readers could they but see it. Here, he spends several hours every day conducting interesting biological experiments and often in consultation with some of the greatest scientists in Japan.

Billiards and chess are two games of which he is very fond—the former with his brothers and the latter with the Empress, who revels in the hardest problems of the chessboard.

The Mikado is a great reader of scientific works and when he is not holidaying in Europe, he likes nothing better than mountaineering expeditions in his own country. He is officially the Son of Heaven, but for sheer popularity, he must be designated the Son of the People.



FAULTS AND HOW TO KNOW THEM

A SPOILT negative should never be thrown away until it has been given a thorough examination and the exact cause of failure discovered if possible.

By consistently doing this your knowledge of photography will steadily grow, and so by hardly noticeable steps your pictures will improve. Eventually, too, the habit will save money, for once able to spot the various troubles you will instinctively try to avoid them in the future.

To help these " courts of inquiry " therefore we give this week a number of common troubles and how they may be recognized, also the remedies if any.

An under-exposed negative with resulting print

Under Exposure

This trouble can be identified by an absence of detail in the shadows. In bad cases, only the high-lights (i.e., sky, faces, etc.) may have affected the emulsion, the rest of the negative being clear gelatine. Resulting prints are harsh and of the soot-and-whitewash variety. There is no real remedy for marked under exposure, but a more pleasing picture can sometimes be obtained by printing on softer paper. This gives a grey, but more evenly balanced, result.

A picture out of focus

Over Exposure

Symptoms are the reverse of the above. Negative is full of detail in all parts, but is flat and lacks contrast, and generally has a dense appearance. As the over exposure increases, the image becomes flatter and less decernible, the opaqueness increasing, until in very bad cases, negatives are solid black with no picture to be seen at all.

In mild cases printing on vigorous paper may give a print of satisfactory contrast, and improvement can sometimes be effected by treating the negative in " Farmer's reducer " (obtainable in tabloid form). This solution takes away the extreme density, and working more on the shadows tends to brighten the image. There is no remedy for bad cases.

The great thing in both the above troubles is to try and recollect the condition of light, etc., which gave the results and by so doing gain a sounder idea of exposure times in general. The use of simple exposure chart, as found in Burroughs Wellcome's diary (1/6), will generally do away with gross errors of exposure and they are well worth studying.

Development

The negative has plenty of detail all over, in high-lights and shadows but is thin and weak, and gives a flat print. A great improvement can be made by " intensification," a process which adds to the strength of the image. The strengthening is carried out by first bleaching the negative and then re-developing.

Simplest way to get the bleacher is in tabloid form (all dealers have it) and ordinary M.Q. is used for the redevelopment. Before intensifying it is better to try the effect of using a very contrasty paper as this may without further trouble give a satisfactory print. Negatives

Light has reached the film other than by the lens

are full of detail but dense and contrasty. Highlights like skies, faces and light clothes clogged, all fine tones being lost. Reduction is the remedy. Farmer's not used here but ammonium persulphate which thins out the highlights without losing detail elsewhere, so taking away the excessive contrast.

The negative is placed in a solution of ammonium persulphate till desired reduction has taken place and then is placed for a few moments in sodium sulphite. Before treating the negative however, try the effect of printing with a soft contrast paper.

Camera Shake

The whole image is blurred, but close examination shows that the blur extends in one direction only, often two distinct outlines are visible.

Cause, not holding the camera quite steadily while the shutter moves over. No remedy for a negative so affected, but "shake" may be avoided if the hints given in the photographic article appearing in issue of May 2nd are followed closely.

Out of Focus

The image here also is blurred but in a general " all-over " manner, the various objects being illy defined all round and not in one direction only, as with " shake." No remedy for negatives, but practice in estimating distances (against the scale on your camera) is indicated.

Fog

Localised, strips or patches, black on negative and white on print extending in any direction across the picture, generally reaching from corners in the case of plate cameras, caused by light getting in through the back or through faulty plate-holders. Remedy—Replace light trap velvet and generally examine for loose joints.

Fog along edges in the case of a roll film may be due to loose rolling of the film after taking from camera. Should the area of fog be in the middle of the film and not extending from the edges, a ' pin-hole ' in the bellows may be suspected.

To test bellows, place an electric bulb in the camera through the open back, muffle the opening with a cloth and put out all other lights. Stretch the bellows in all directions, and any hole will become visible by the light shining through. Small holes can be repaired by a patch of adhesive tape applied to the inside of bellows. There is no real remedy for fogged negatives of this type, but in general, printing on gaslight paper makes the patches, etc., very obvious, while " printing out paper" helps to make them less noticeable.

When a negative is affected evenly all over it is called " general fog." If this extends from edge to edge it is pretty certain that the red light is not safe and is causing the trouble. Remedy, get a deeper red glass or work much further from the lamp and shield the film entirely when possible.

In the case of plates, a card should be placed over the dish while developing, only a quick and occasional glance being taken at the image. Develop films in the shadow of your own body and turn occasionally to the lamp for inspection purposes. Most of the modern high speed films will fog slightly in red light if exposed unduly to the rays.

If the frame round the edge of the plate or film is quite clear, then the trouble has taken place in the slide or camera. Too hot developer also will make fog, but this is not a usual cause.

If the negative has been correctly exposed and long enough given in the developer, general fog will not interfere greatly with aspect of the final prints. General fog must not however be considered quite harmless for it tends to take away fine detail.

Negatives so affected can be cleared by a short immersion in Farmer's reducer, but prevention is much better than cure in this case.

Circles of Clear Gelatine on Negative

These print as solid black circles in the positive and are caused by air-bubbles during developing preventing the solution from working. A plate should be placed in water for a moment then slid edgeways into the developer rubbing the surface gently all over with finger. A film should be thoroughly softened in water before going into the M.Q. The only remedy for air-bubble marks is elaborate retouching on the negative and then again on the print.

A mottled surface may be due to allowing plate to stand in developer for some time without rocking the dish. There is no remedy. Sometimes you get an uneven density, which is due mainly to a change in temperature while a plate or film is drying, or to change in the *rate* of its drying. Never turn a plate or film the other way up or bring near a fire when half dry. Bleaching and re-developing may remedy. If the areas of varying density are clear cut, the cause is unequal immersion during development.

Minute black spots on print are probably caused by dust which stuck to the emulsion during development of the plate. For this there is no remedy.

Blurred Figures

This shows that the shutter speed was not sufficient to arrest the movement. An article on how speeding subjects might be taken by a slow shutter appeared in "Hobbies Weekly" of June 29th, 1935, and should be studied by anyone wishing to try pictures on sports day, etc. There is no remedy for blurred figures.

One final word—Do not be too hasty in throwing away apparently spoilt negatives, unless very hopeless. The storing of films at least, causes no inconvenience and it is quite within reason that a little later on as your skill increases you will see possibilities in negatives now considered complete failures. Enlarging, which will be dealt with in an early article, makes many a good picture from faulty negatives, blurred figures etc., can often be cut away and small but good parts can be brought up to presentable size.

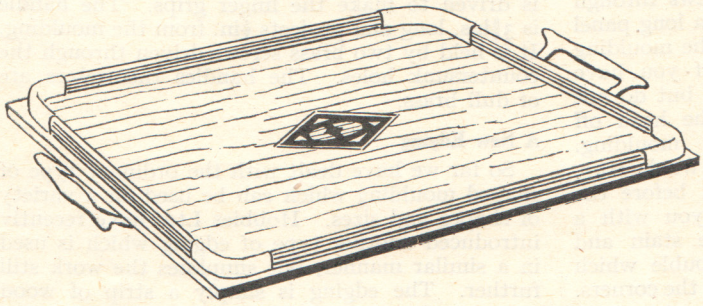
Under exposures, too, with a little workmanship and treatment have been known to make quite artistic evening pictures or silhouette studies and have actually won prizes.

HINTS ON TRAY MAKING

TRAY making is one of those jobs for the handyman which he can either use to fill up an odd hour or two, or else can turn to useful and profitable account. Trays of all sizes are obviously wanted by people with a home.

There is the small tray for the early morning tea or the glass and decanter, right up to the large one which is necessary for setting meals. There is, moreover, no regulation size, and in consequence a number of odd shaped boards can be utilised for the purpose. This is a point to remember, because frequently the worker has some pieces of plywood which are not sufficiently serviceable for other purposes, but which will come in very useful for a tray.

Generally speaking, these trays are oblong in shape, but there is really no reason why, if you want to make a fancy one, it should not be hexagonal or even octagonal. The only difference is that the latter require a little more trouble in cutting the shape of the edging which goes round.



A completed tray with simple edging and metal corners

Materials required

The handyman who follows Hobbies Weekly regularly has a distinct advantage in a job of this kind for he knows exactly where to buy all the material. Beyond the plywood base, he must have a suitable moulding edge to form the shaped raised part, then he needs the tray handles to fix at the end, and here he has a variety of types which will please any individual.

This is all that is really needed for the average tray, but the keen worker will be pleased to add some suitable colour transfers to the centre of the bottom of the tray to create a bigger artistic effect. Again, if you think the tray is going to scratch the table on which it stands, you can easily add some of the little circular feet below each corner, to raise it slightly above the table.

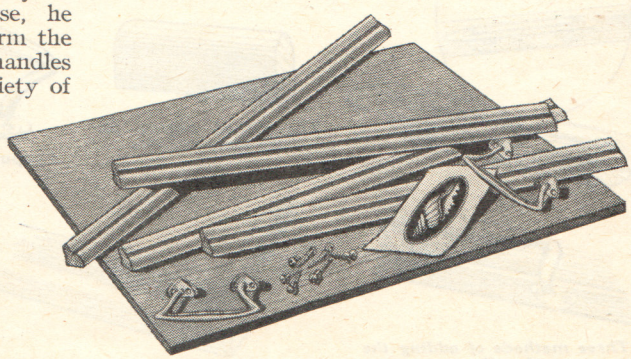
The process of making is quite straightforward, but before beginning one must decide on the sizes. Small ones can be 15ins. by 10ins. up to the large size of 20ins. by 15ins. The latter, however, are larger than is comfortable with most people, and one must remember to have a baseboard of thicker material in consequence. If a large board like this is cut in $\frac{1}{4}$in. wood, for instance, it has a tendency to wring and warp even with the moulded edge securely fixed.

The Baseboard

The baseboard for the ordinary small trays should be of $\frac{1}{4}$in. or $\frac{3}{8}$in. plywood, and the edges must be cut quite true with the fretsaw, or, of course, with an ordinary tenon saw used fairly flat. Then clean up all the edges with glasspaper, taking care not to run them off or to fray out the top and bottom ply.

Next comes the moulding and for this four pieces of the special tray moulding supplied by Hobbies, Ltd. are required. This is specially suitable and has a flat base which stands firmly on the board itself. It is obtainable in oak, mahogany or hazel walnut. The first two are suitable for matching up to the particular plywood board which you have for the base, but hazel walnut is a very light, almost colourless wood, which is particularly suitable for staining down to any shade you require. If, therefore, you have an ordinary birch plywood base and stain it to an imitation oak, you can treat the hazel walnut moulding in the same way.

The moulding is made to fit round the edge of the tray, but it is a good plan to set it inwards about 3/16in. from the edge of the plywood in



A group of the necessary materials

order to give the glue and screws a firmer hold and prevent the likelihood of breaking through.

The main question is in measuring off the moulding to the correct lengths. Two long and two short pieces will be required, and the ends of each must be mitred to an angle of 45 degrees.

The Mitred Ends

They are cut on one of the small mitre-cutting blocks which are obtainable for 9d., and in measuring off, remember to take the dimensions on the inside of the moulding. Have the moulding stand firmly to the cutting block, and use the saw perfectly upright.

Make sure, too, to get both sides the same length, and having cut all four, test them up. You may not have got a correct length on the first cut, and if so, it will be impossible to make a good rectangular framework. Do not attempt to shape it up with file or glasspaper, but saw off the other corresponding length to make it the same.

The tray edging is then treated with glue and stood down on the base having previously been marked out for its position with a pencil.

Screw from Beneath

If the tray is a large one, add screws through from the underside and also drive in a long panel pin or thin nail across the corner of the moulding to hold the two pieces together. If you have not a panel pin, use a long thin nail but do not drive it right home. Cut or file the head off afterwards flush with the actual moulding.

If you are proposing to stain the whole tray, it is probably a good plan to do it before the moulding is added. This provides you with a flat surface on which to brush the stain and polish or varnish, and saves the trouble which might otherwise arise of getting into the corners.

The moulding, too, can be treated in strips, although it will have to be handled more carefully. Stain and polish it after having cut and tested out for the correct length. If the base has been polished all over, the surface will have to be scratched slightly where the moulding is to stand, in order that the glue may get a grip. In the ordinary way glue will not hold on a polished surface.

The Handles

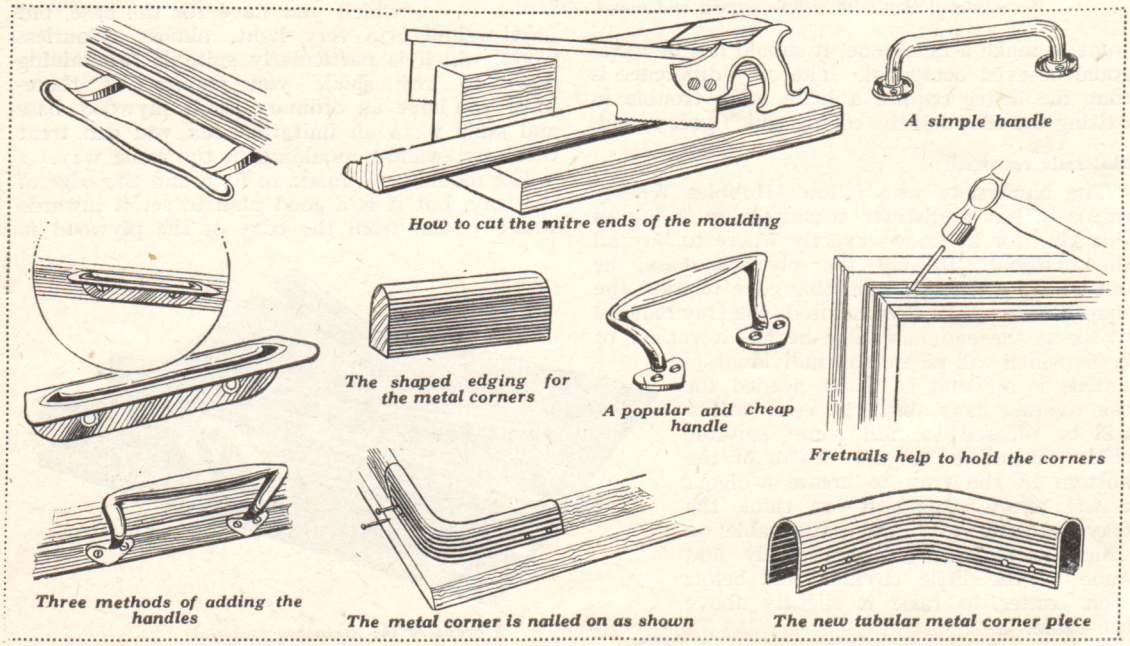
Next we come to the tray handles, and the illustrations show several kinds which are available. Some are fixed on the underside of the tray, whilst others are placed on the end of the moulding, as also illustrated.

If the handle is being fixed under the base, long screws can be used to drive through that part into the moulded edge. If, however, the handle is being put on to the side of the moulding, comparatively short screws will have to be used. See they are strong, however, because they will have to take the whole weight of whatever is carried on the tray itself.

A new type of handle recently introduced is also shown herewith. This is quite a simple rectangular form of metal into which a recess is driven to make the finger grips. The handle is 3¾ins. long and projects ⅝in. from the moulding. It is held by two brass screws driven through the countersunk holes. The handles themselves are of dull brass.

A New Edging

So far we have dealt with the ordinary type of shaped moulding which can be used on a variety of shapes and sizes. Hobbies Ltd. have recently introduced another type of edging which is used in a similar manner, but simplifies the work still further. The edging is simply a strip of wood



A simple handle

How to cut the mitre ends of the moulding

The shaped edging for the metal corners

A popular and cheap handle

Fretnails help to hold the corners

Three methods of adding the handles

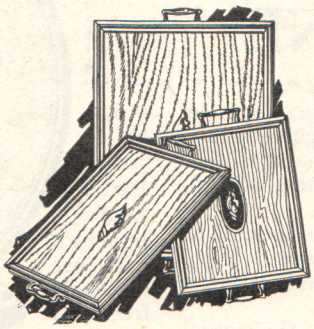
The metal corner is nailed on as shown

The new tubular metal corner piece

measuring ⅜in. by ¼in., the top edge of which is rounded off nicely as can be seen in the illustration.

This is used with special corners which save the trouble of mitring. They are oxidised finish suitable for a dull stained wood. The tubular shape allows them to bed over the end of the wood which has a similar section, and two nail holes are provided in each end on each side, again as shown in the illustration.

This detail also shows clearly how the wood slips into the tubular portion, and the holes into which the nails are driven. As the wood is only ⅜in. thick ¼in. nails must be used.



A group of three useful trays with transfers as described here

Nailing the Corners

The holes drilled in the metal are not opposite each other, and it is not intended that the nails should go through both sides. The idea is that four nails should be used to give added strength.

Stand the shaped corner in position on the wood, then measure off the length of the edging, allowing 1in. of it to go into the actual tubular corner. Glue the edging very carefully down to the base, and before the glue is set put the metal corner in position in order to ensure it will fit.

Here again screws can be driven through the underside into the thickness of the edging.

The whole should be allowed to set before fixing on the corners and driving in the nails. See the corners bed down firmly on to the base by tapping them slightly with a hammer. There is no real weight on the corners, the strain being on the actual edging which it is essential, therefore, to fix firmly. The handles are put on the ends in the ordinary way.

Adding Transfers

The addition of transfers makes all the difference to the finished article, and a wide range of them is shown in the Hobbies Handbook which are suitable. Do not attempt to add large and intricate colour pictures, but merely decorate the tray by a central diamond or shell pattern, or add one of the suitable figures or shapes shown.

These transfers are added after most of the polishing has been undertaken, but before the final coat is applied. Put a coat of varnish or polish over the transfer after it has been fixed, in order to provide a hard surface to prevent scratching. It is not recommended, however, that these be added to any tray which is coming in for everyday normal use in the kitchen, because obviously they will get scratched and the colour torn off.

Prices and particulars of suitable wood, handles, moulding and all requirements can be obtained free on request if you enclose a 1d. stamp for return postage.

FILM NOTES FOR MAY

I SUPPOSE you've never even thought that Hollywood is the safest place in the world to be in at any time, and in any part of it?

This aspect of the film city is not often mentioned, but the fact remains that it is so. Provisions for the safety and well-being of the famous stars and players, and the host of valuable technicians, in a big film studio, are far beyond those taken by any city to protect its inhabitants.

The average Hollywood studio has a policeman on duty every three hundred square feet of its area. It has more firemen, in proportion to its buildings, than any city.

Metro-Goldwyn-Mayer, for instance, maintains a complete truck company and fire department for 125 buildings, with alarm boxes within 75 feet of each other. There is a special electrical alarm circuit that cannot be disrupted by any cause, as any damage to it, anywhere, would be compensated by a duplicate system. An automatic sprinkler system, is installed in every building and on every sound stage.

The "health department" of a film city comprises a studio physician, dentist, and an emergency hospital. The great roaring shops in the studios are the last word in safety. No piece of machinery is ever allowed to operate without adequate safety guards installed to avoid accidents. Weekly classes in accident prevention and "safety first" are given to all workers.

Rigorous traffic rules and a 10-mile speed limit are enforced on studio streets, with traffic officers stationed at an average of 100 yards apart on the main roads and mirrors set at right-angles to warn motorists if any traffic is coming from around the corner.

No matter for what purpose you may be visiting the studios, your pass is inspected four times before you get on the "lot." Any person getting into the studio by subterfuge, and without a pass, could not get past the first official.

All make-up material and tools or devices used in this class of work are invariably sterilised before they are used in the make-up department, which in appearance resembles an operating theatre so far as sanitary technique is concerned.

The sound stages themselves are all ventilated and air-conditioned, the air-being filtered until chemically pure. Not a microscopic particle of dust can exist. The temperature is regulated to a hundredth of a degree, so is the humidity. No air in the world is so accurately conditioned.

There are a great many other interesting features of any modern film studio, and if any of you chaps ever have the opportunity afforded you of going over one of the great British studios, take my tip and go. You will never forget the experience, and you will learn more in a day than you could ever learn by reading about this subject.

The Cinefan

A WORKING MODEL JIGSAW MACHINE

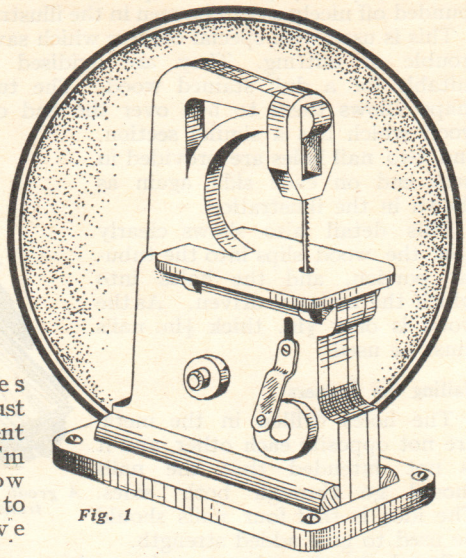


Fig. 1

Here's a mechanical novelty for you to make. It is geared and works by hand or steam engine! See full-size patterns on page 223

THOSE of our young fretwork enthusiasts who keenly enjoy making real working mechanical models will, undoubtedly, have little hesitation in deciding to build the miniature Jig-saw Machine illustrated opposite.

The model is made from odds and ends certain to be found about any fretworker's corner, so the construction is quite inexpensive as well as being really jolly interesting to undertake.

Like its companion the band-saw, the actual machine can be seen in any large wood machinist's shop where it is used particularly for cutting work —that is impossible to do with the endless band-saw, of course—such as inside scrolls, fretwork, etc. In fact, it is worked rather like an enlarged fretwork machine, excepting the saw blade in this case is a true vertical-reciprocating one cutting wood on a much larger and heavier scale.

Making the Parts

With regard to the model, however, it must be stated that although this works similar in principle to the real article, the reader will appreciate that because of its size and composed almost entirely of plywood, it was found necessary to omit some of the smaller additions and make slight alterations in the design which, fortunately, are of no great significance to the general idea.

The first procedure in this direction is to obtain the very few necessary materials as given in the Cutting List, and then carefully scrutinize the full-size patterns given elsewhere in this issue. Note that parts marked W are cut separate from the sheet and pasted down in the usual way to the ⅛in. thick plywood, whereas the other patterns are treated similarly to the ¼in. thick material.

Care in Gear Cutting

It is essential that when cutting out the gear wheels to exercise special care when shaping the teeth ; because if made rough and inaccurate, then obviously, one cannot expect them to engage and work with regular smoothness as intended.

It is also necessary to have all washers and wheels, etc. fitting the dowel spindles fairly tight, whilst the latter should fit the holes in both side plates with just sufficient freedom to allow them to revolve easily.

Before removing the pattern remains from the gears, too, it is a good idea to touch up any inevitable roughness with a suitable three-cornered fretwork file.

Assembling the structure and gears

Having cut out and removed the paper remains from all the other parts, select the central framing and left-side plate and nail evenly together as shown in Fig. 2, inserting the small table supports in their slots (D) to ensure the parts are in alignment before doing so.

The spindles for the large and small gear wheels are two pieces of ¼in. dowel, each cut 1⅜ins. and 1in. long respectively. Chamfer the ends and glue the large gear in the centre of the longer spindle ¾in. down (as at Fig. 3), and the smaller gear to its spindle about ½in. in from one end.

Gluing the Parts

It is advisable to ensure they are thus glued not in twist by trying them temporarily in place as at Fig. 2, setting the right-side plate on top and keeping it in position with the supports and base plate. The small aperture on the side plate enables one to see and rectify with the file any teeth not working properly.

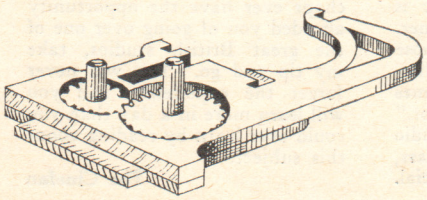


Fig. 2—The gears and first assembly

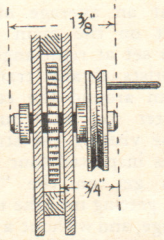


Fig. 3—Section of spindle, driving wheel, etc.

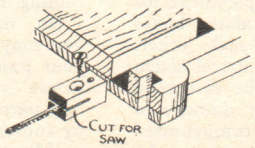


Fig. 4—The saw clamp

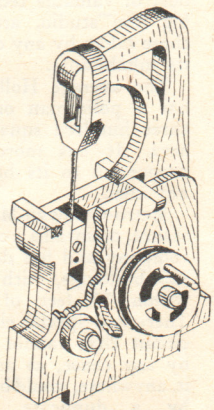


Fig. 5—Cut-away view showing saw and clamp

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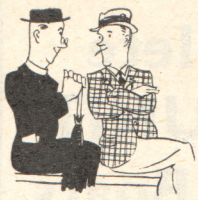

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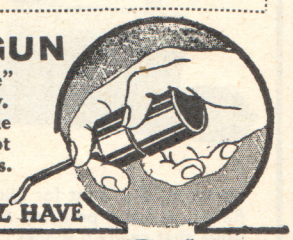

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Complete, and guaranteed to fly.

We supply all Kits by—
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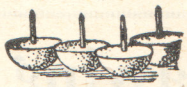
(*Name nearest station when ordering.*)

Send stamp for lists from Sole Distributors—
AER-O-KITS (Sheffield) (J. W. Kay)
(Dept. H.) 127, Portobello Street, Sheffield 1
or ANY BRANCH OF HOBBIES LTD.

RUBBER FEET for Cabinets



Handy little feet for fixing to the underside of cabinets, trays, etc,. so preventing damage to the surface beneath.

Fitted with spikes ⅜in. diameter, half-round section. Price 3d. set of four. Post 1½d.

Hobbies Limited, Dereham and Branches

⅜in. diameter with recess for screws. Price including screws. 3d. set of four, post 1½d.

READY-TO-FIT DOORS

Well-made doors with ⅜in. Oak Framework

No. 600A. 8ins. high, 9ins. wide,
1/6 each, 2/9 per pair.

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1/6 each, 2/9 per pair.

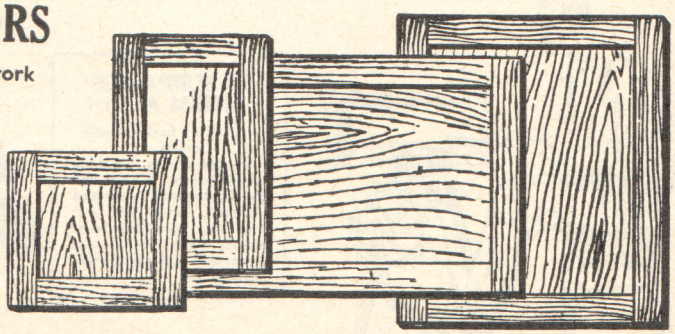
No. 601. 12ins. high, 8ins. wide,
1/9 each. 3/3 per pair.

No. 602. 12ins. high, 18ins. wide,
3/3 each, 6/- per pair.

No. 603. 16ins. high 14ins. wide,
3/- each, 5/6 per pair.

(No. 603 is in light wood, suitable for staining). Postage 6d. extra.

HOBBIES LTD., DEREHAM

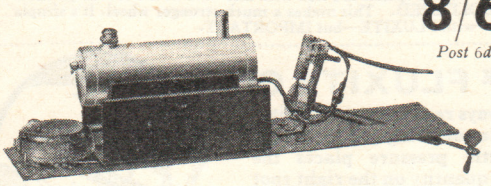


A Complete ENGINE UNIT for Model Boats

A powerful steam engine complete with propeller and shaft. Suitable for boats up to 30ins. long.

8/6

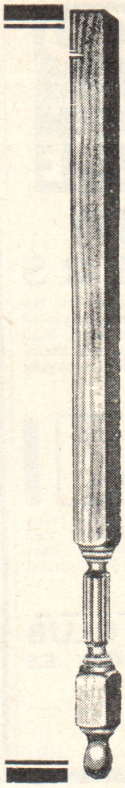
Post 6d.



Drives a 30in. boat for about 20 minutes on one filling. It has a polished brass boiler with a safety valve that really "works"—new safety type lamp fastening. An engine which is a real glutton for work, direct coupled to propeller. Mounted on metal base.

HOBBIES LTD. DEREHAM

Branches and Agents in principal towns.



Have You Seen these shapely "Reeded" LEGS?

Here are two legs that are different to the usual "twist" or square patterns. Instead, there is a "reeded" or fluted design which gives a big touch of distinction.

These are legs you can use on the best jobs. They are beautifully cut and finished and are offered at prices which bring them within the reach of everybody. The tall leg is No. 532 and the short one No. 534.

No. 532. 36ins. × 1⅜ins. "Reeded" Legs in beech, 3/9 set of four. Post 10d.

No. 534. 29ins. × 1⅜ins. "Reeded" Table Legs in Beech 3/9 set of four. Post 1/-.

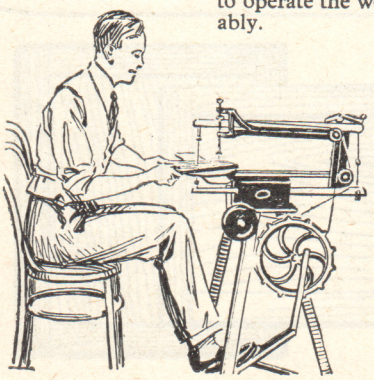
Obtainable from all Branches of Hobbies or direct by post from

HOBBIES LIMITED
DEREHAM NORFOLK

Sawing and Drilling by Treadle

An Old Favourite in a New Form

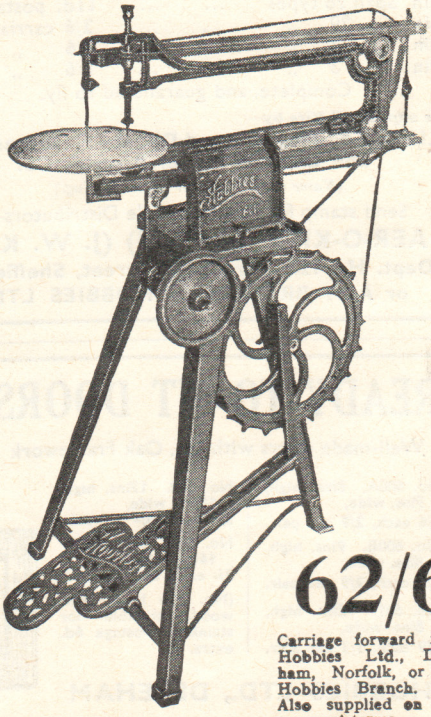
Any fellow who makes things in wood will find this new A1 a revelation in speed and efficiency. With it he can cut wood ¾-inch or even 1 inch thick, straight or on the bevel. The treadle drilling attachment is a great time-saver. Never before has a machine of this quality been offered at such a low price. Your hands are free to operate the work at speed and comfortably.



IT SURPASSES THEM ALL!

R. F. of Ludgershall writes:—

"I have used a machine for 25 years. I have had the Companion Lathe and Fretsaw, and the A1, but this machine surpasses them all. I am surprised at the easy running of it."



62/6

Carriage forward from Hobbies Ltd., Dereham, Norfolk, or any Hobbies Branch. Also supplied on easy payment terms.

When revolving smoothly according to plan—as they should have done in the first place—glue all permanently together again, including the ¼-round beading (see Fig. 1) and allow to set.

General construction

The advantage of this small model is that it can be worked by the hand or belted to a stationary steam engine. To enable this combined arrangement, first carefully shape a V-groove around the circumference of the driving wheel (see Fig. 3) with the edge of a wood rasp to the depth of the dotted lines as indicated on the pattern, finally smoothing over with the corner file.

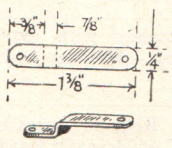


Fig. 6—The connecting rod shape

The handle should be preferably an 1in. long roundhead wire nail or a piece of ⅛in. dowel inserted tightly in the hole provided.

Now glue the washers to the spindles, allowing a little freedom on either side. Glue the driving wheel to the right-hand side of longer spindle as at Figs. 3 and 5, and the connecting rod disc (H) on the opposite side of smaller one as close as possible to the side plate, then make the spindle end flush with same as at Fig. 1.

Completing the machine

As the saw clamp piece slides up and down slot (J) of the central framing (see Figs. 4 and 5), it will be noticed that this part was shown in position on the pattern so that when cut out it will just fit with sufficient freedom. Before cutting the length, however, carefully drill the holes and sink one to suit a ¼in. by 2 flat head screw. Now saw it to length and make a cut in this end with the fretsaw as shown at Fig. 4.

This is for the jigsaw blade which is an ordinary fretsaw blade broken in half in such a manner so that the top end has a plain shank whereas the teeth cut with a downward movement.

This is approximately 2ins. in length and held in the clamp by the tiny screwnail as shown by the detail. Rub the sides of clamp with candle and try it in place as at Fig. 5, pushing same down to the extreme bottom of slot (J), before inserting the plain end of blade through the hole of cutting table and gluing this in position across the supports (Fig. 1).

Guide and Rod

Now drill a suitable hole in the end of guide piece (F) for the saw blade and, placing the plain end of same through this, insert same to central cross arm slot (F). The guide should fit tight in place without gluing so it can be easily removed when necessary to change and fit a new blade.

The connecting rod is made from a piece of thin aluminium or brass cut to the size and shape as shown at Fig. 6. Drill two suitable holes and then screw one end to the hole in disc (H) and the other to the saw clamp as shown by the illustration at Fig. 1.

This procedure completes the work and if the model has been built carefully as instructed, the maker will be surprised to see how it cuts through paper or very thin card.

CUTTING LIST

1 piece Birch plywood. 6ins. by 6ins. by ¼in. thick.
1 piece Birch plywood. 6ins. by 6ins. by ⅛in. thick.
1 6in. length No. 34 Beading. ¼in. sides.
1 piece ⅛in. dowel rod. 6ins. long.
1 strip Aluminium or Brass. 2ins. by ⅛in. by 1/32in.

HOBBIES LEAGUE CORRESPONDENCE CLUB

These Members of Hobbies League would like to get in touch with other readers and so form pen friendships which will undoubtedly prove interesting to all. In this way, one has a wide circle of friends and increased knowledge in people and places, not only in one's own country, but all over the world. Members should write direct to the addresses given, stating their full address and age, adding any hobbies in which they are interested. Hundreds of members have already taken advantage of this Correspondence Club in this way and others who wish to do so should notify the Registrar with the necessary particulars.

NAME	ADDRESS	WANTS FRIENDS	INTERESTS, Etc.
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John Fairburn.	*50 Lawson Avenue, Grimsby, Lancs.*	*Anywhere except British Isles.*	*Stamps, Cycling, Picture Postcards.*
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Milton Tan.	*9 Halifax Road, Singapore, S.S.*	*England.*	*Fretwork, Stamps.*
Ronald Norledge.	*25 Thornton Hill, Wimbledon, London, S.W.4.*	*Near home.*	*Anything.*
Fred T. Alderman.	*520 Earlham Road, Norwich.*	*Anywhere.*	*Stamps, Newspapers.*
Mr. T. Robson.	*9 Drylaw Terrace, East Linton, Prestonkirk, E. Lothian.*	*British Isles.*	*Anything.*
Kanchanray Amin.	*Manekchowk, Vaso, (via Nadiad), India.*	*Anywhere.*	*Anything.*
M. M. Patel.	*C/0. K. Ray Amin, Kauchau Bhuran, Vaso, (via Nadiad), India.*	*Anywhere.*	*Anything.*
W. J. Cook	*15 Wormholt Road, Shepherds Bush, London, W.12.*	*Anywhere.*	*Stamps, Models, Photos.*
A. L. Holmes.	*44, Nelson Street, Kettering, Northants*	*Anywhere.*	*Anything.*

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To sell anything except fretwork goods or those shown in Hobbies Handbook. The advertisements are inserted at the rate of 2d. per word prepaid. Name and address are counted, but initials or groups, such as E.P.S. or £1/11/6 are accepted as one word. Postal Orders and Stamps must accompany the order. They will be inserted in the earliest issue.

PATENTING INVENTIONS. Advice Free.—King's Patent Agency, 146H, Queen Victoria Street, E.C.4.

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100 DIFFERENT STAMPS FREE to applicants for ½d. approvals. Big discount.—Cox, 21 Dennis Mansions, Westcliff.

MINIATURE BOWLS. Play on the lawn or indoors. Set of four hardwood bowls, 3in., with jack and full instructions costs only 4/6, post 6d.—Hobbies, Ltd., Dereham.

SAMPLE CASTING MOULD for making lead toys, 2/9. Catalogue 3d.—(below)

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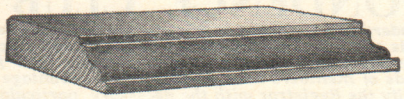
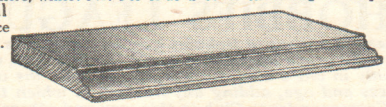


BASE MOULDING...2ins. wide, ⅜in. thick..No. 41.
OAK, 3½d. per foot. HAZEL PINE, 3d. per foot.



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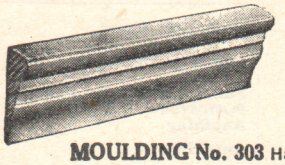
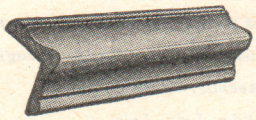
HAZEL PINE Price 1½d. per foot.

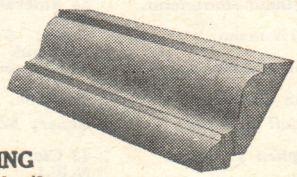


MOULDING No. 303 Hazel Pine

¾in.	..	1½d. per ft.	1/3 per doz.
1in.	..	2d. „ „	1/9 „ „
1½in.	..	2½d. „ „	2/3 „ „

Postage Extra.





No. 300. — ½in. Sides. Price 3d. ft. 2/6 doz. ft.

No. 301. — ½in. Sides. Price 2d. ft. 1/9 doz ft.

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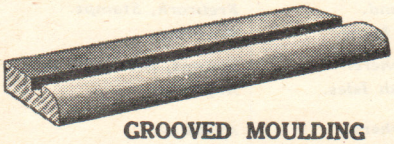
CORNICE MOULDING
2ins. wide, ½in. thick **No. 43.**
HAZEL PINE. Price 3d. per ft.



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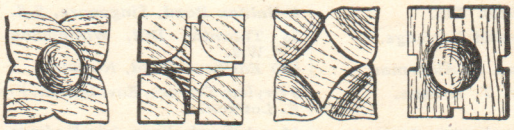

No. 230.—1½d. No. 231.—2d. No. 229.—2d. No. 228.—1½d.
All these rosettes are in beech and measure 1⅜in. square. Suitable for ornaments on any work.

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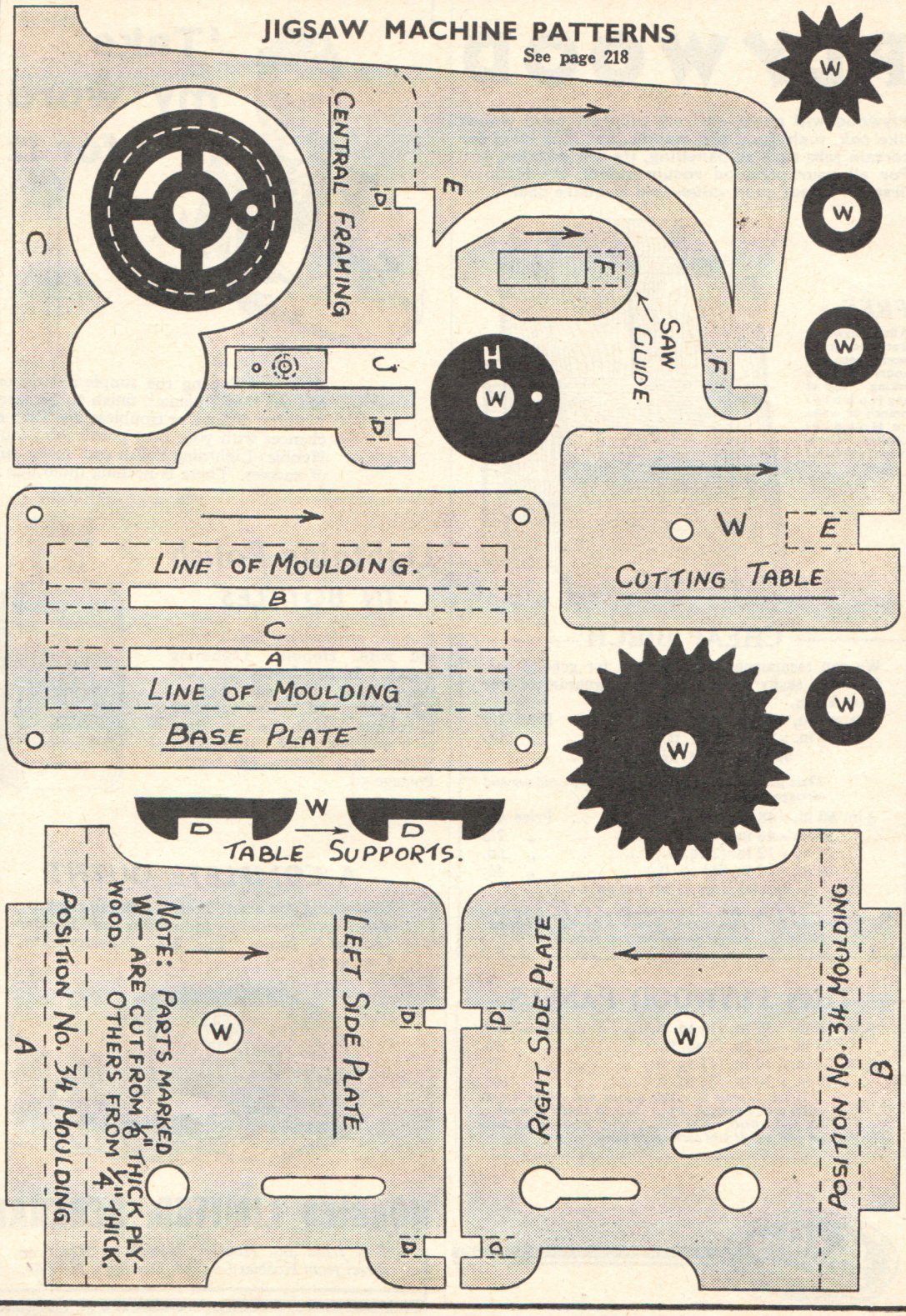
See page 218



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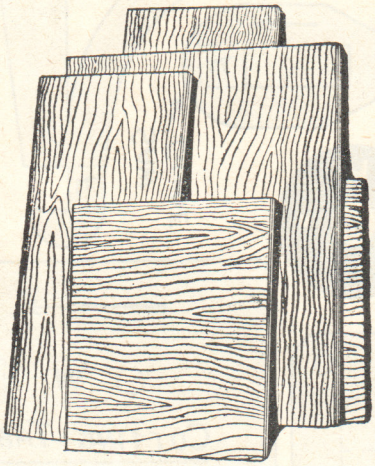

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	24 in. × 24 in. (4 sq. ft.)	„ 11d.

Special sizes at 3½d. per sq. ft.

These panels are too large for parcel post and are sent carriage forward.

3/16 in.	60 in. × 48 in. (20 sq. ft.)	Price 4/6
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1/32 in.	18 in. × 12 in. (1½ sq. ft.)	Price 4½d.
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HOBBIES

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DEREHAM, NORFOLK

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The Editor is always pleased to consider suitable articles for these pages, which, if accepted, will be paid for at the usual rates. While every effort will be made to return unsuitable contributions (if stamps for that purpose are sent with them), the Editor does not accept any responsibility for their loss.

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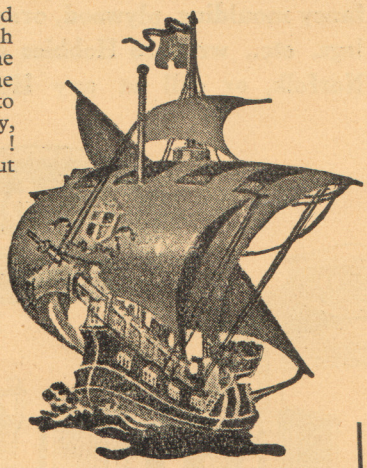

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3ins. high 3d. ,,
6ins. ,, 6d. ,,
9ins. ,, 1/- ,,
Also sold singly.

Postage is 1½d. extra on any quantity.
Hobbies Limited
Dereham
Norfolk

OVERSEAS GIFT VOUCHER

for Hobbies Sale Goods

This Voucher entitles anyone living outside the United Kingdom to goods value 2/6 FREE on any order over 10/- in sale prices for goods shown in Hobbies 1936 Sale List. Fill in your name with a list of gift goods required, and attach to your order. Add the number and value of the postal order, as well as your name and address

Latest date for use—July 31st, 1936

Name.....

Address.....

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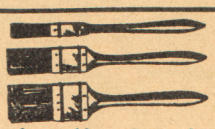
Note—Only to be used by those living Overseas.

Varnish Brushes



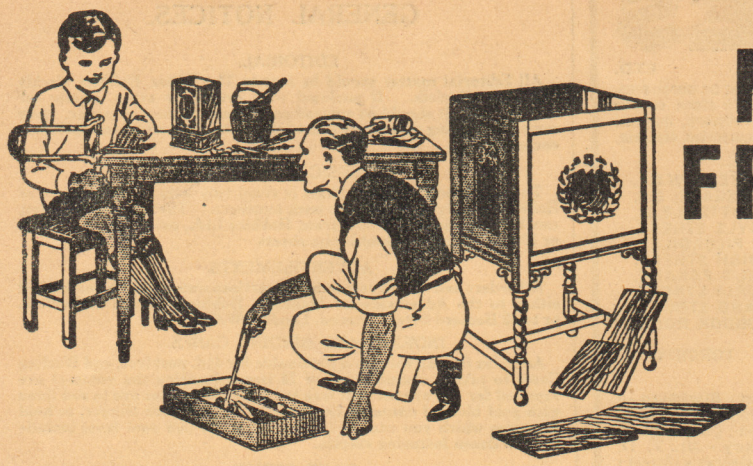
Bristles set in Rubber. These are sound quality Brushes offered at value-giving prices.

Hobbies Ltd., Dereham.

¾ in., 4d. 2 in., 9d.
1 in., 4½d. 2½ in., 1/3
1½ in., 6d. 3 in., 1/6
Post 1½d.

REPLY COUPON

One of these small Coupons and a stamp for 1½d. must be attached to your letter to the Editor, if you are enquiring about anything which demands an answer. Cut the Coupon out and put it in with your letter which should be addressed to The Editor, Hobbies Weekly, Dereham, Norfolk



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will interest
Dad and you

Any handyman can make them

The articles shown below are made from full-size patterns on large design charts. Except where shown, these charts are 4d. each (postage 1d.), and the wood and fittings are supplied complete for the making. The legs are ready turned.

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Stands 2ft. 6ins. high—Design No. 1806. Built in Oak, turned legs supplied—Complete parcel 12/6. (Postage 1s.)

A BOOK REST
Length 14ins. Design No. 1715. Built in Mahogany. Complete parcel of planed boards 3/-. (Postage 9d.)

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Height 15ins. Design No. 1781. In Oak. Grooved legs and corner posts supplied. Price 15/-. (Post 1/-.)

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An 8-day clock in mahogany. Design No. 1013. Wood complete 2/6. Clock movement 12/6. (Postage 6d.)

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Draughts board which shuts as a box. In Mahogany and Padouk. Parcel of wood, etc., 4/3. (Postage 9d.). Design No. 664.

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Stands 16½ins. high, 10½ins. wide. Design, 157 Special (9d.) Wood, pillars, windows etc. Complete 9/4. (Post 1/-)

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All Hobbies goods are obtainable from leading ironmongers and stores, or Hobbies Branches in London, Glasgow, Manchester, Birmingham, Sheffield, Leeds, Southampton, Brighton.

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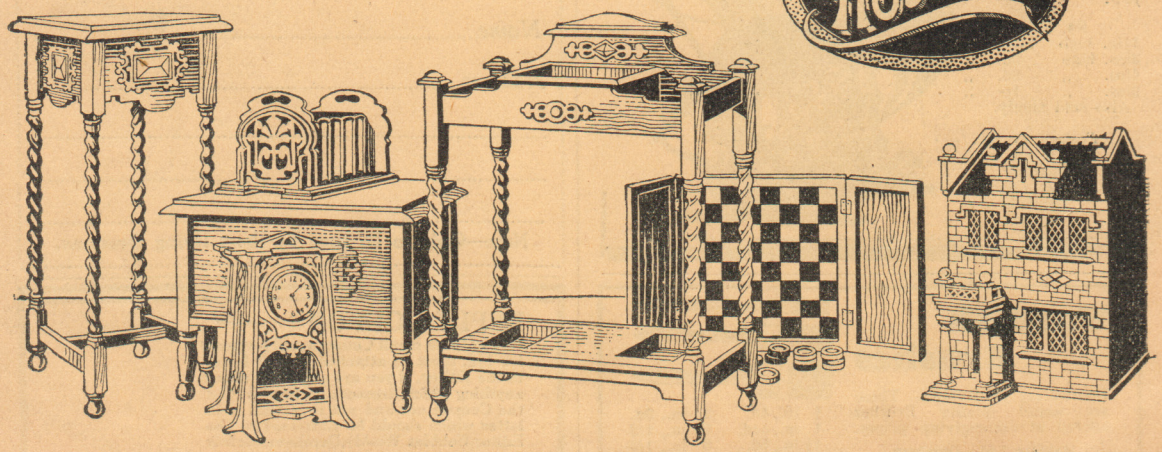

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